



## ABRITES Diagnostics for Ford/ Mazda User Manual

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## Overview

ABRITES diagnostics for Ford/Mazda is a professional software for diagnostic of Ford/Mazda vehicles.

### Standard diagnostic functions:

- Read Vehicle Identification
- Read Fault Codes ( DTC )
- Clear Fault Codes
- Device Scan
- Data Display / Measured values
- Diesel Engine Injectors Programming
- Programmable Module Installation
- Service Functions

### Special functions:

- Read/Write EEPROM
- Mileage Recalibration
- Key Learning

### Advanced functions:

- Custom Request
- Dump Tool

### Supported protocols:

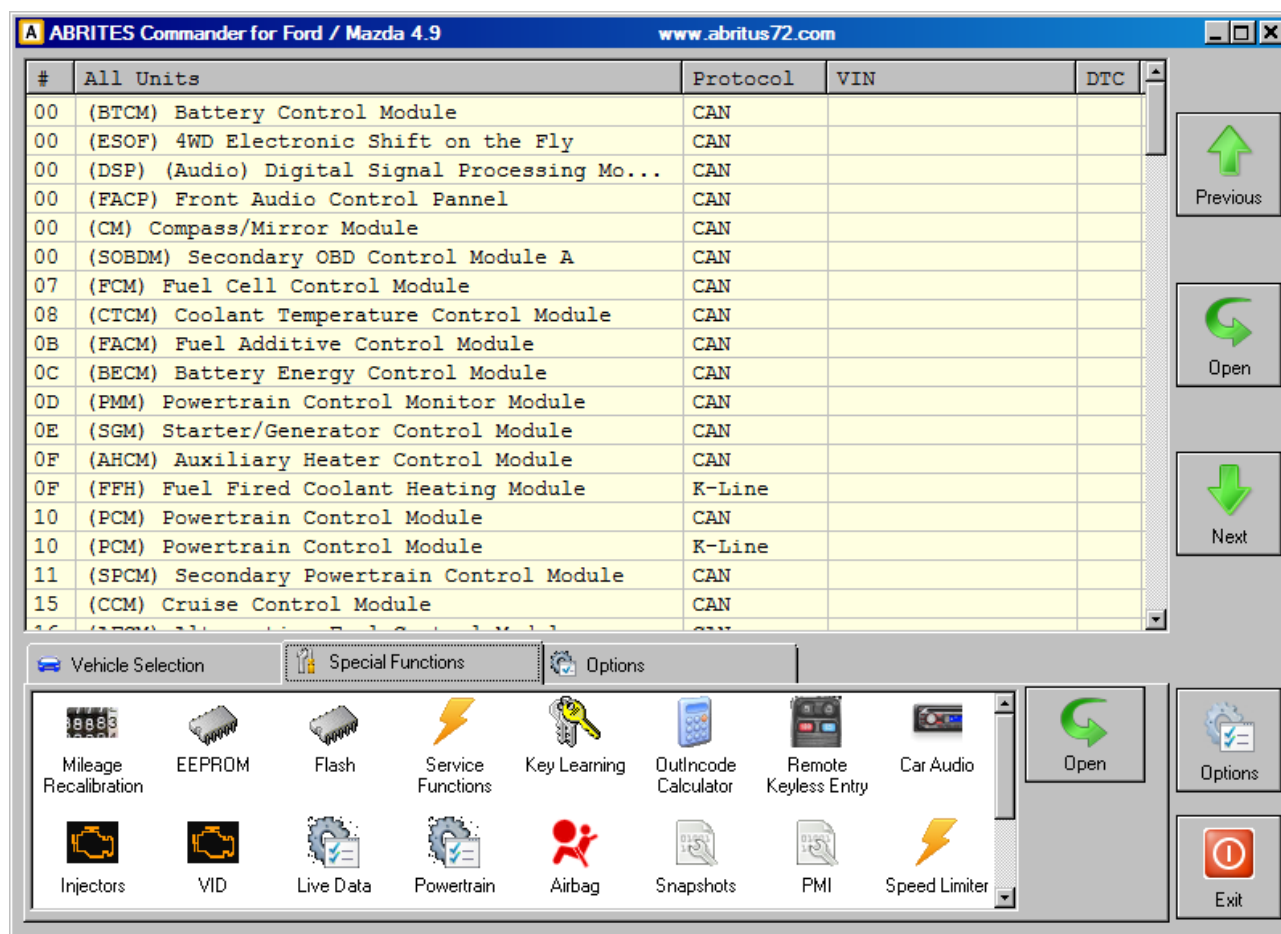
- High Speed CAN – 500kb, 6-14
- Mid Speed CAN – 125kb, 3-11
- K – line 7
- J1850 PWM – 2-10 ( requires additional adapter )

**Note:** Depending on the purchased version some of these functions may not be available in your software.



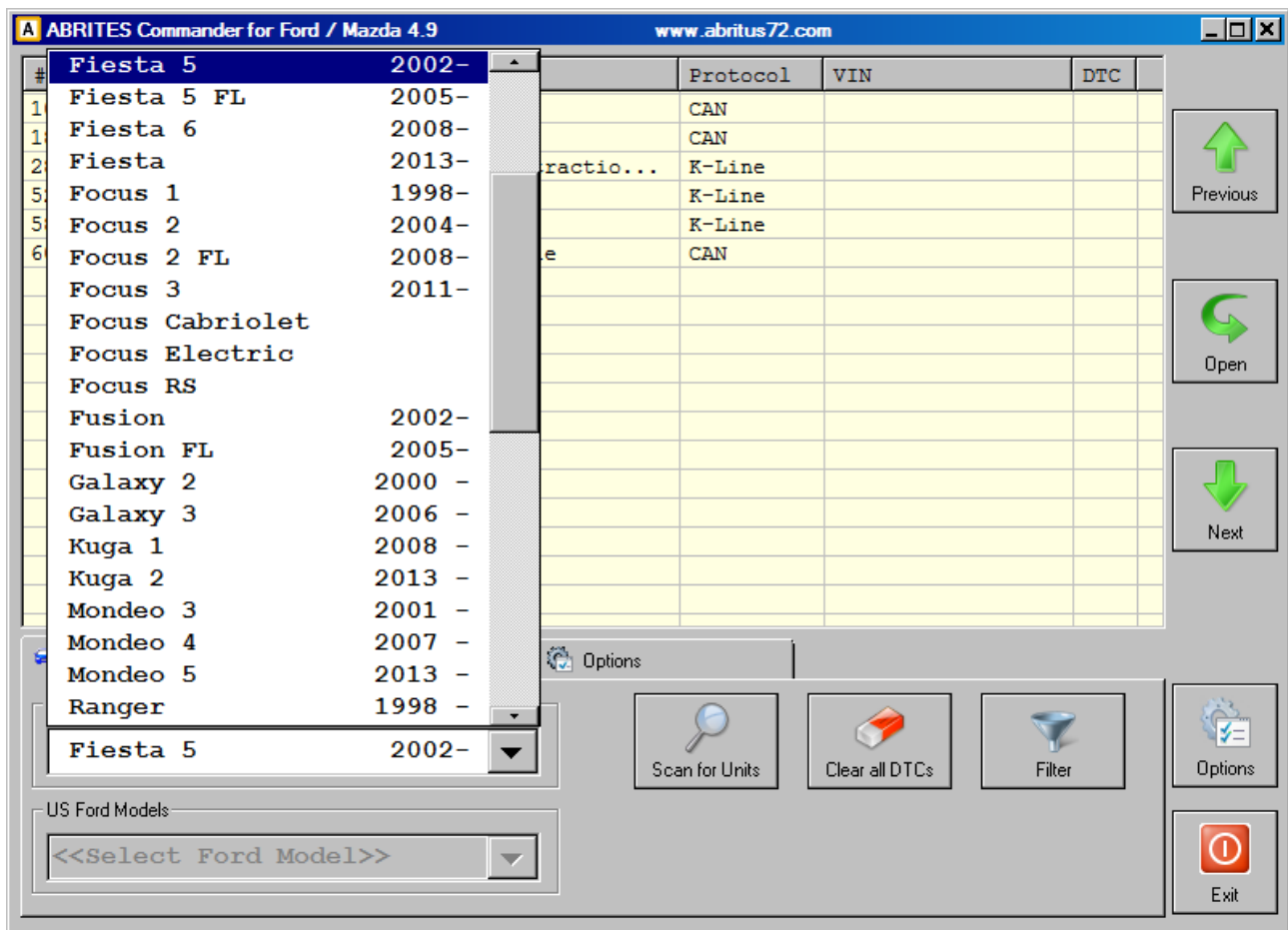
## 1. Getting Started

When you run ABRITES diagnostics for Ford/Mazda it will try to automatically detect the appropriate hardware interface and will connect with it. If the connection failed a message box with the explanation of the problem will appear.



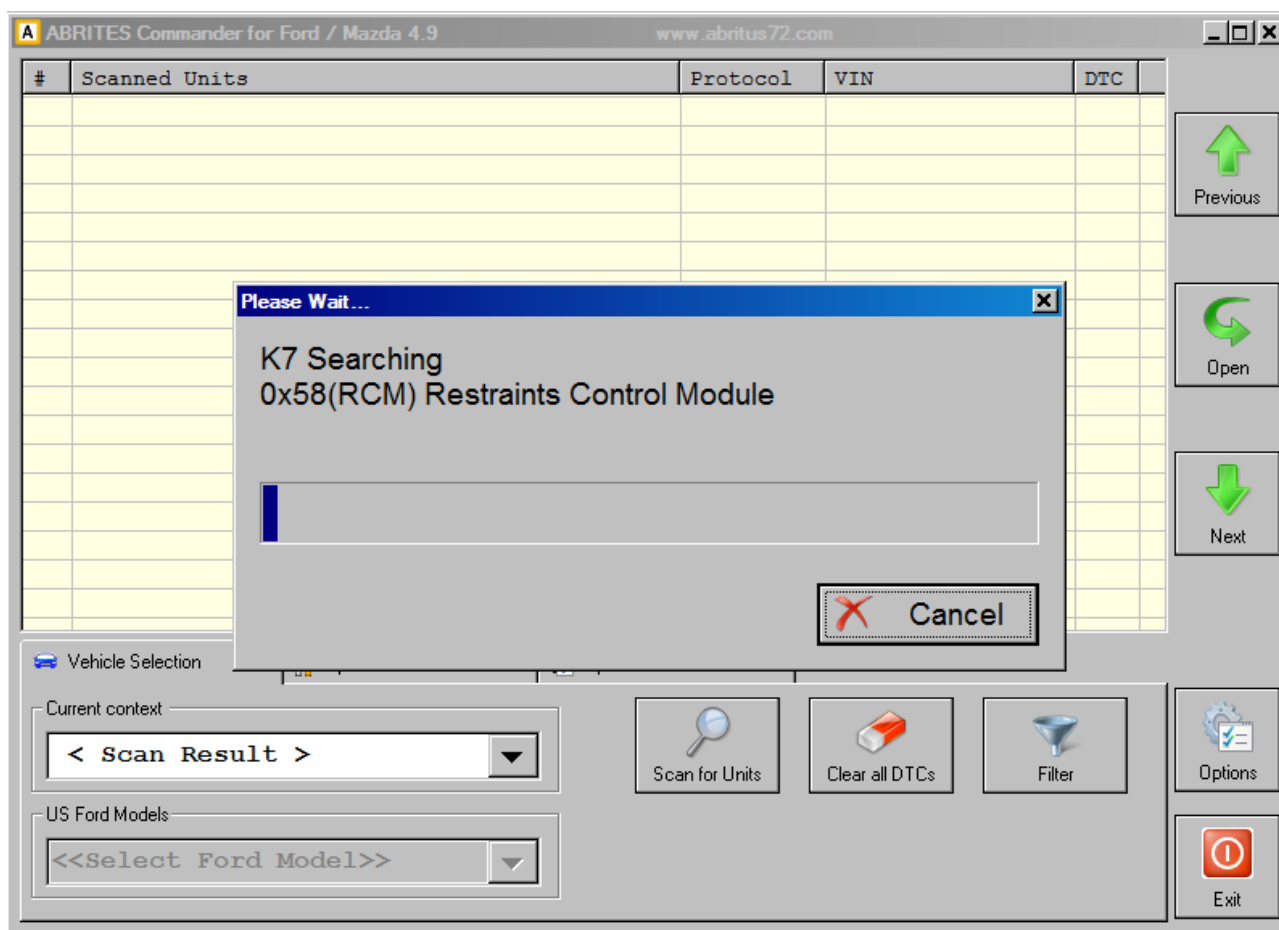
## 2. Vehicle Context

By default, when ABRITES diagnostics for Ford/Mazda is started in the main list all available electronic control units are displayed. You can reduce the number of displayed units by specifying the vehicle context. To change the vehicle context select a desired model.



### 3. Scanning for ECUs

The device scanning function is helpful when you want to perform a quick DTC check of all available device units in a vehicle. When you click on the "Scan all" button on the main screen, a progress window will appear. The behaviour of the scanning can be changed by the "Device Scanning" option. Refer to the [Configuration](#) section.





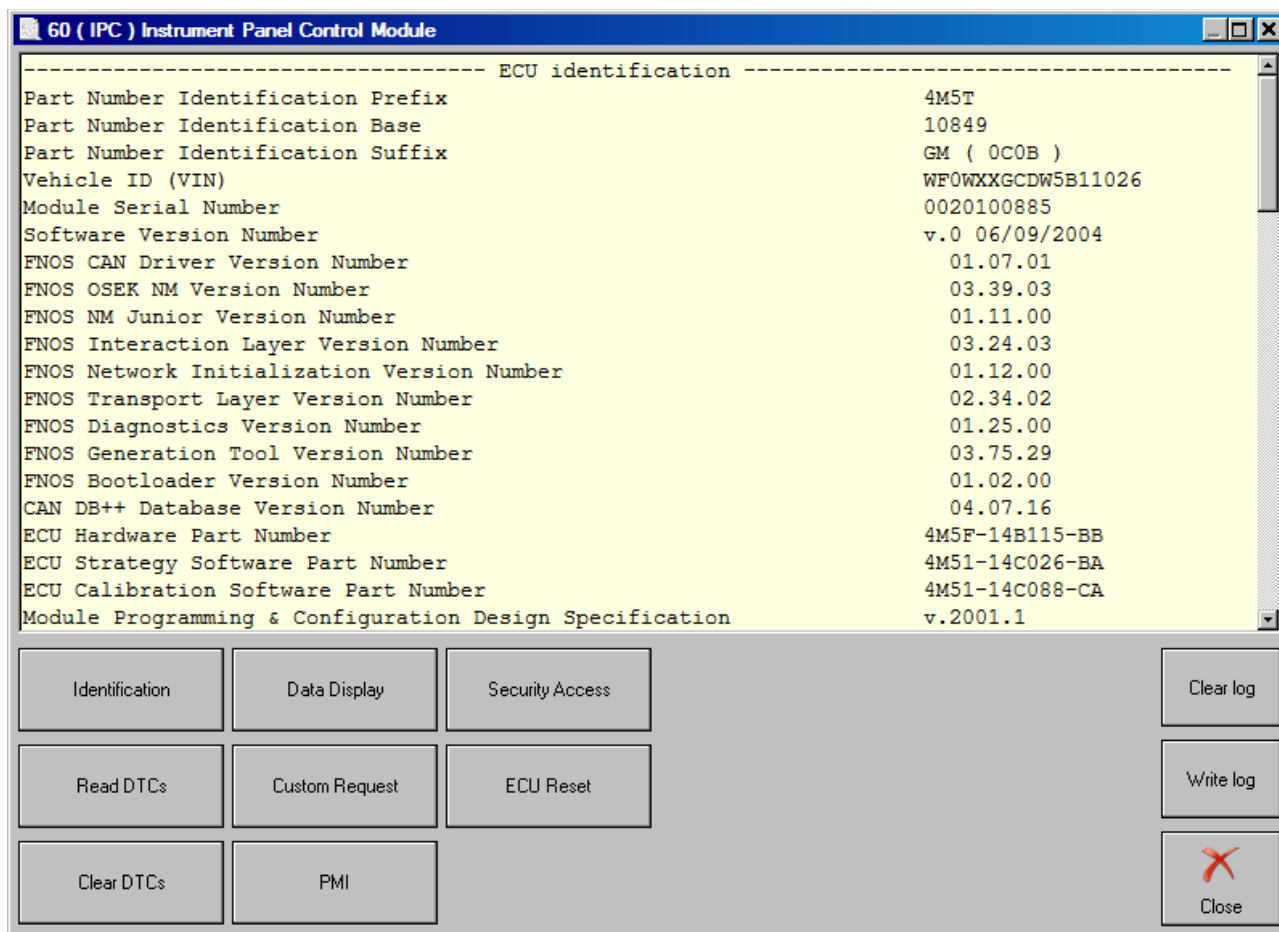
## ***4. Options***

## Diagnostic

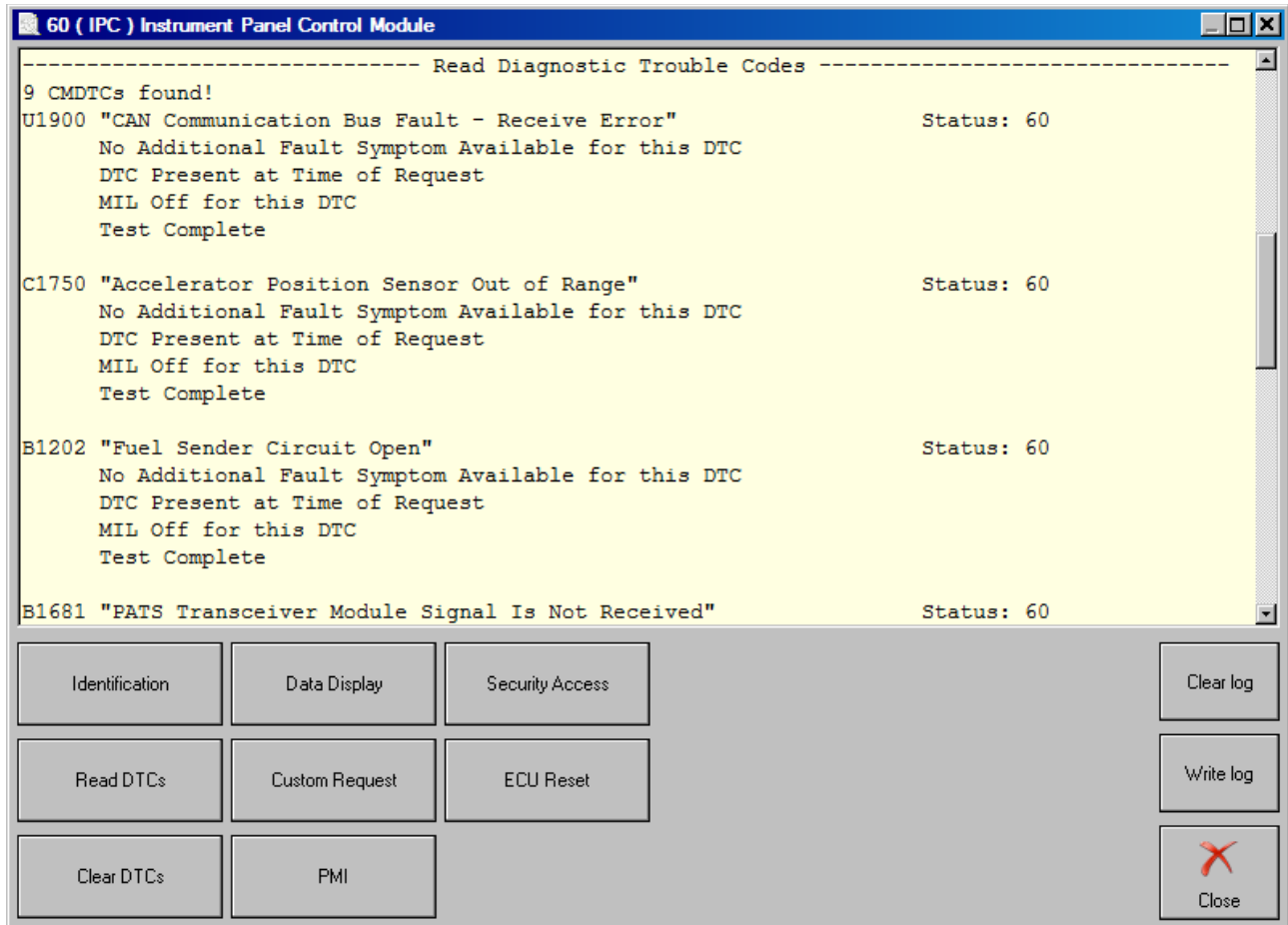
### 5. ECU identification

With this function hardware and software variant, calibration level can be seen.

This information is useful when an used ECU is needed to replace damaged original part.



## 6. Read / Clear DTC

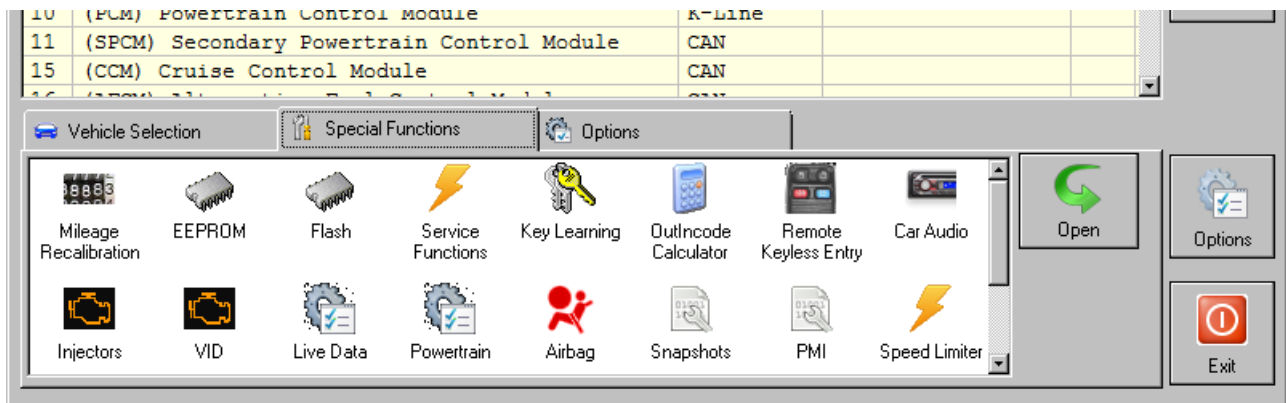


[illegible]

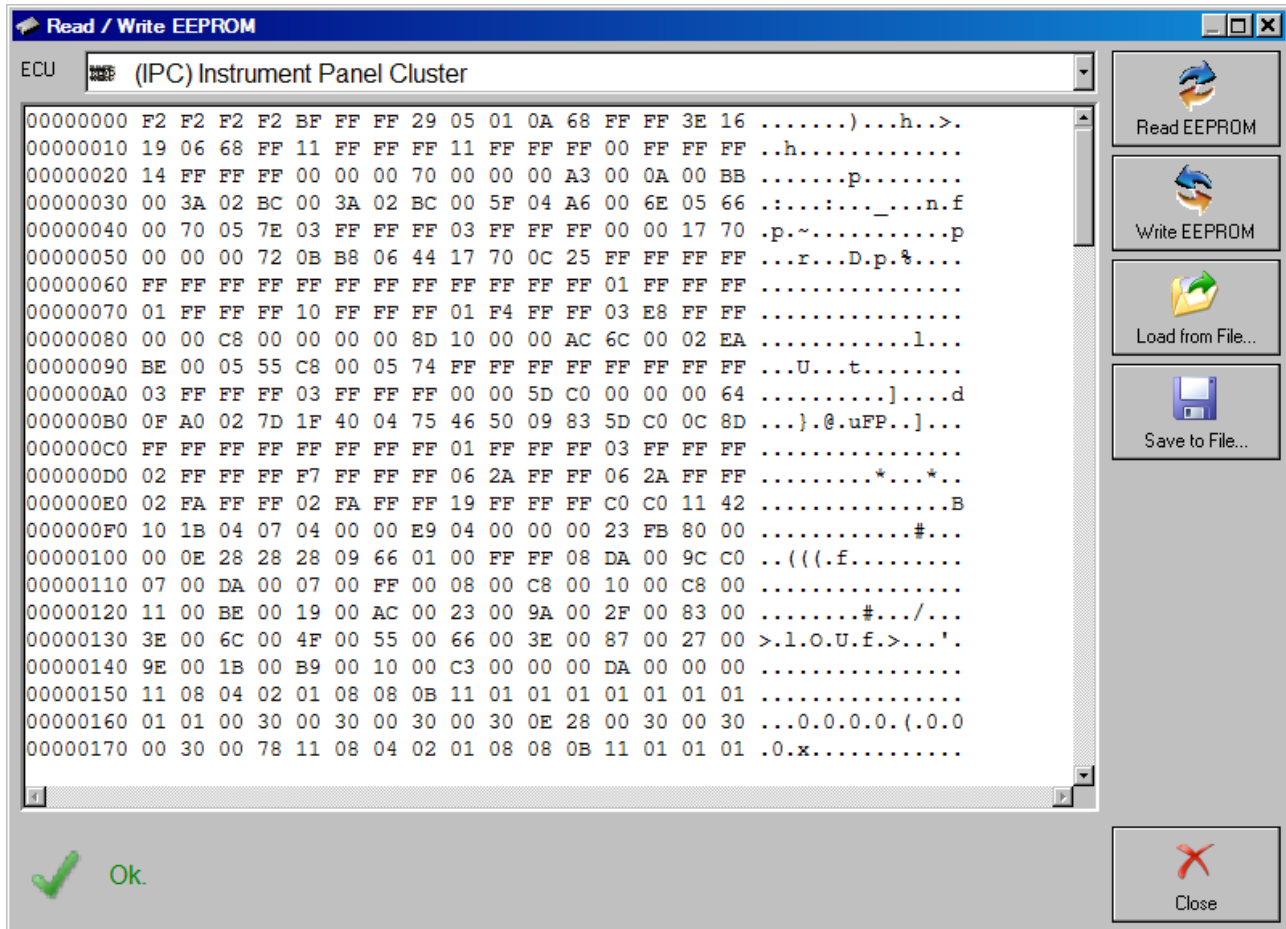
## 8. Special Functions

ABRITES diagnostics for Ford/Mazda provide some diagnostic functions, which are specific only to our product or they are not supported by the other similar diagnostic tools. These functions are separated in the Special Functions list.

The list is located in the bottom right corner of the main screen. You can run a special function by double clicking on it or by selecting it and clicking on the button Open in the right of the list.

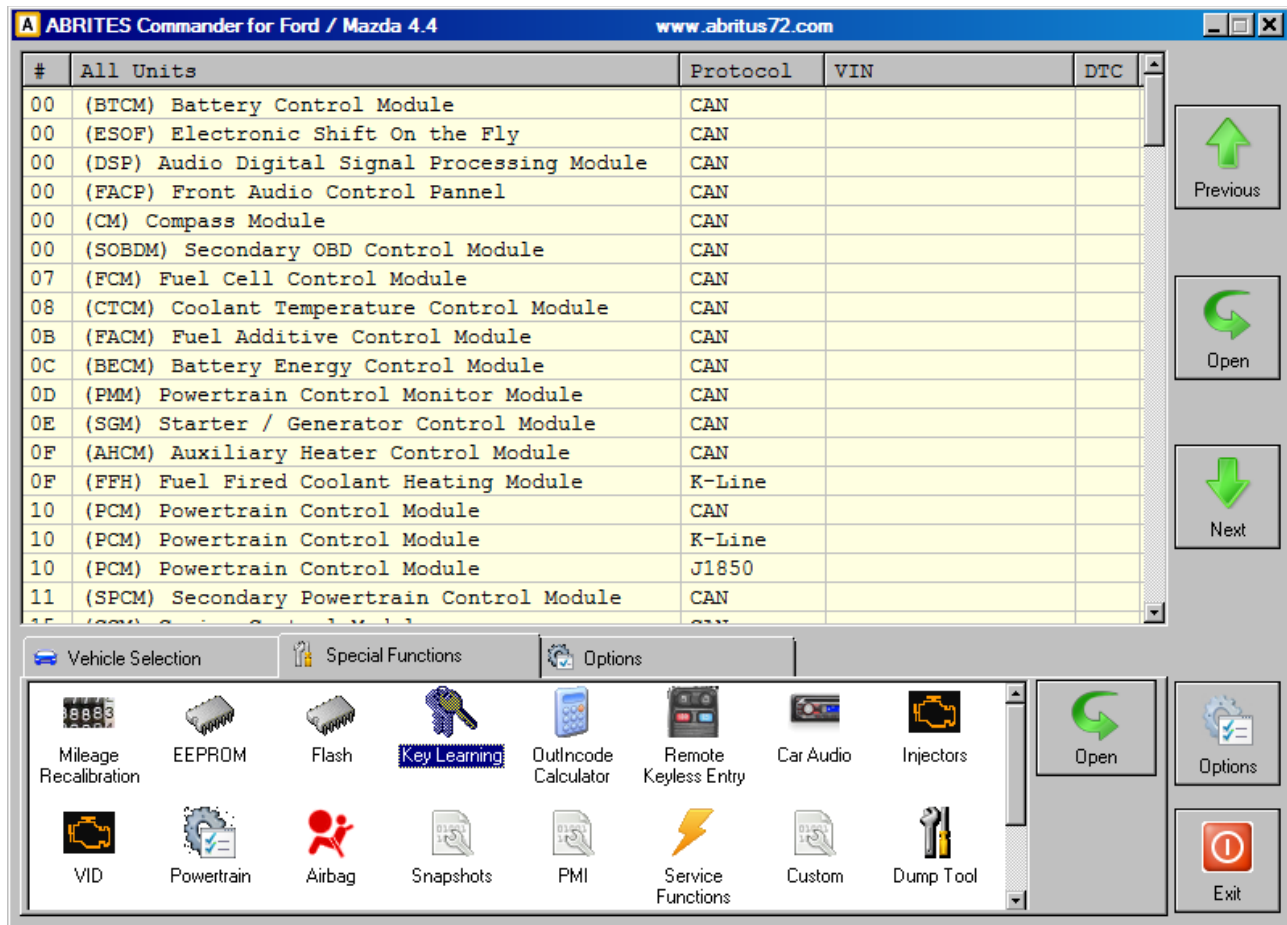


### 8.1 Memory Read / Write



## 8.2 Key Learning

Go to the Special Functions screen. Select Key Learning.



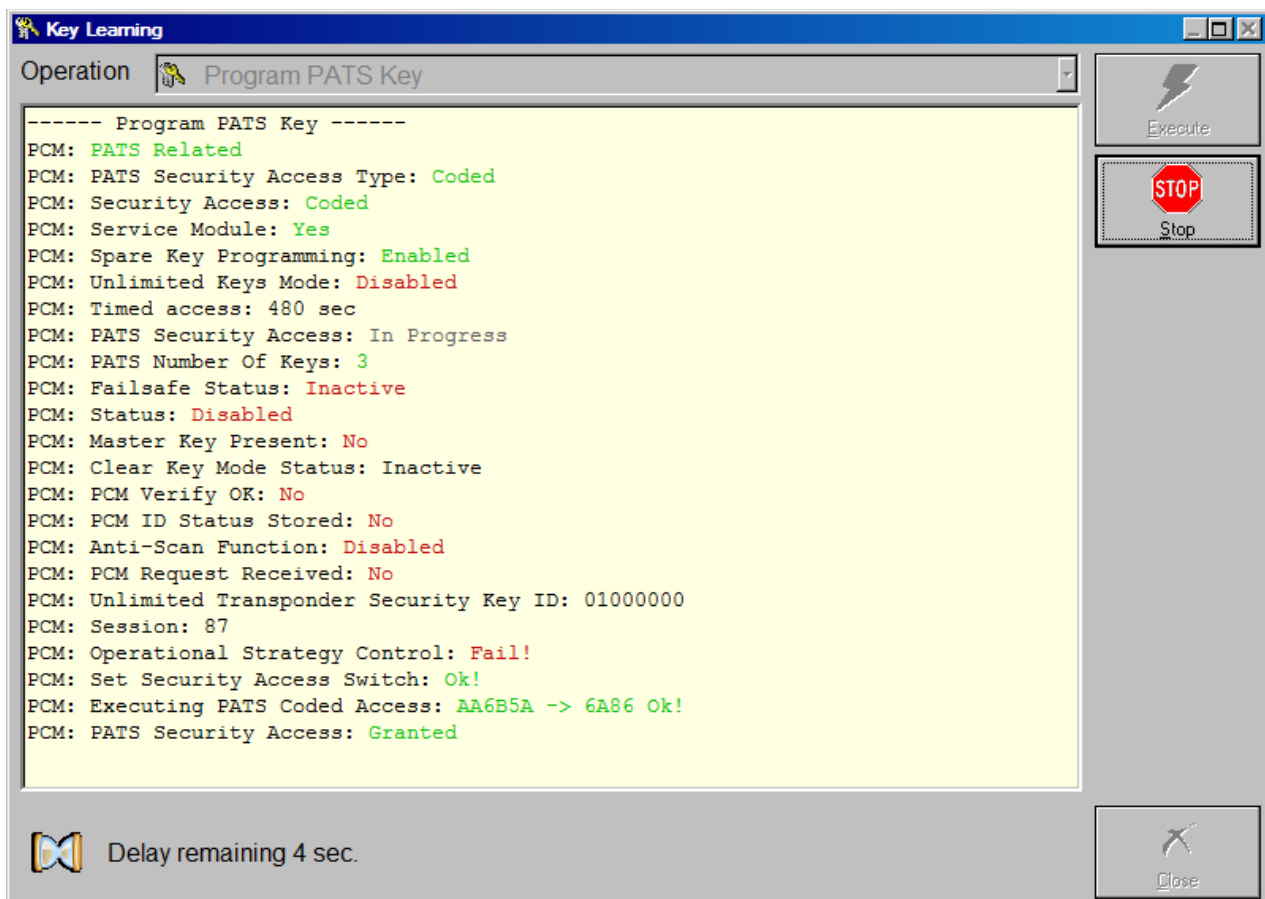
## 8.3 PATS Information

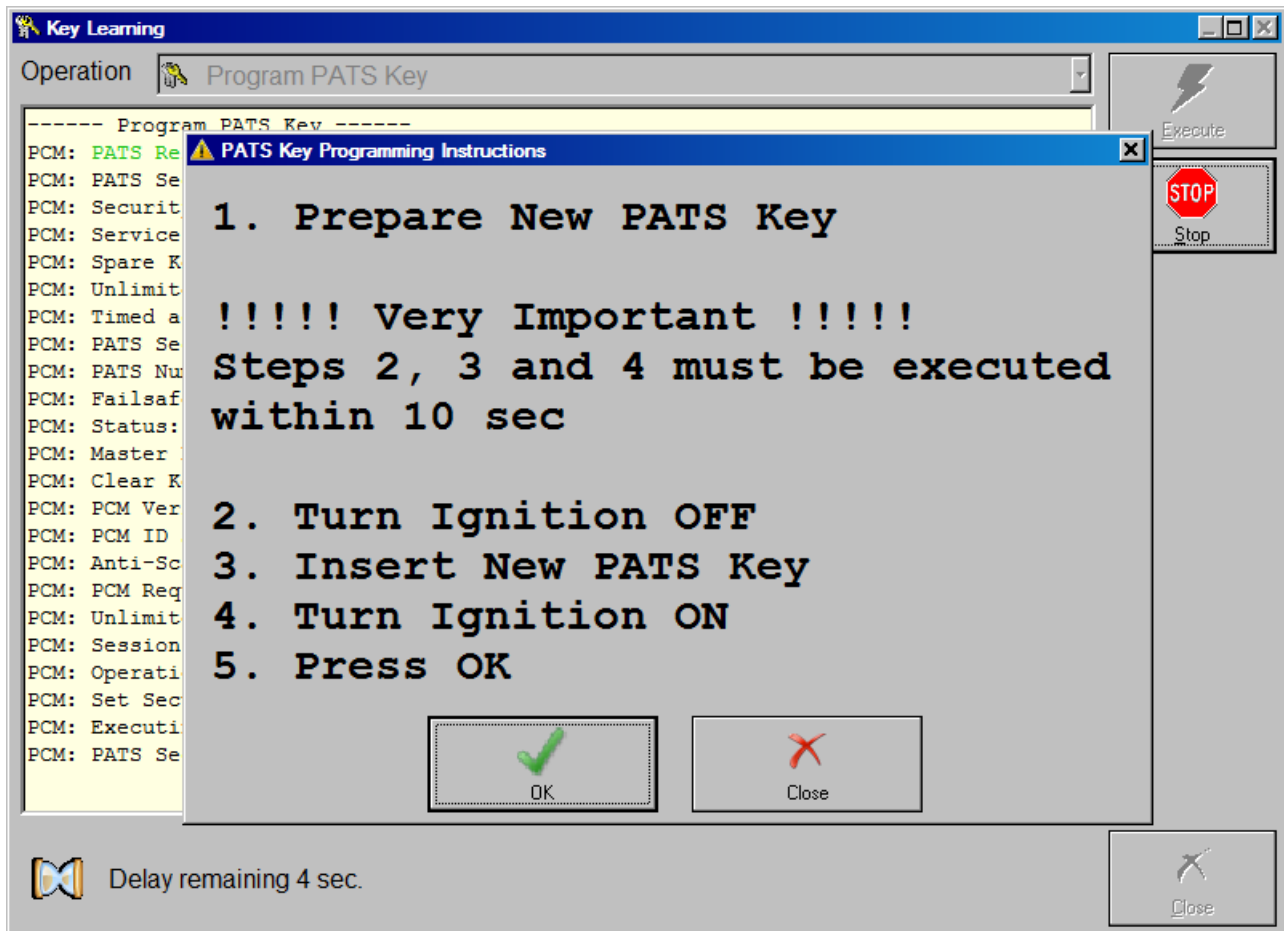


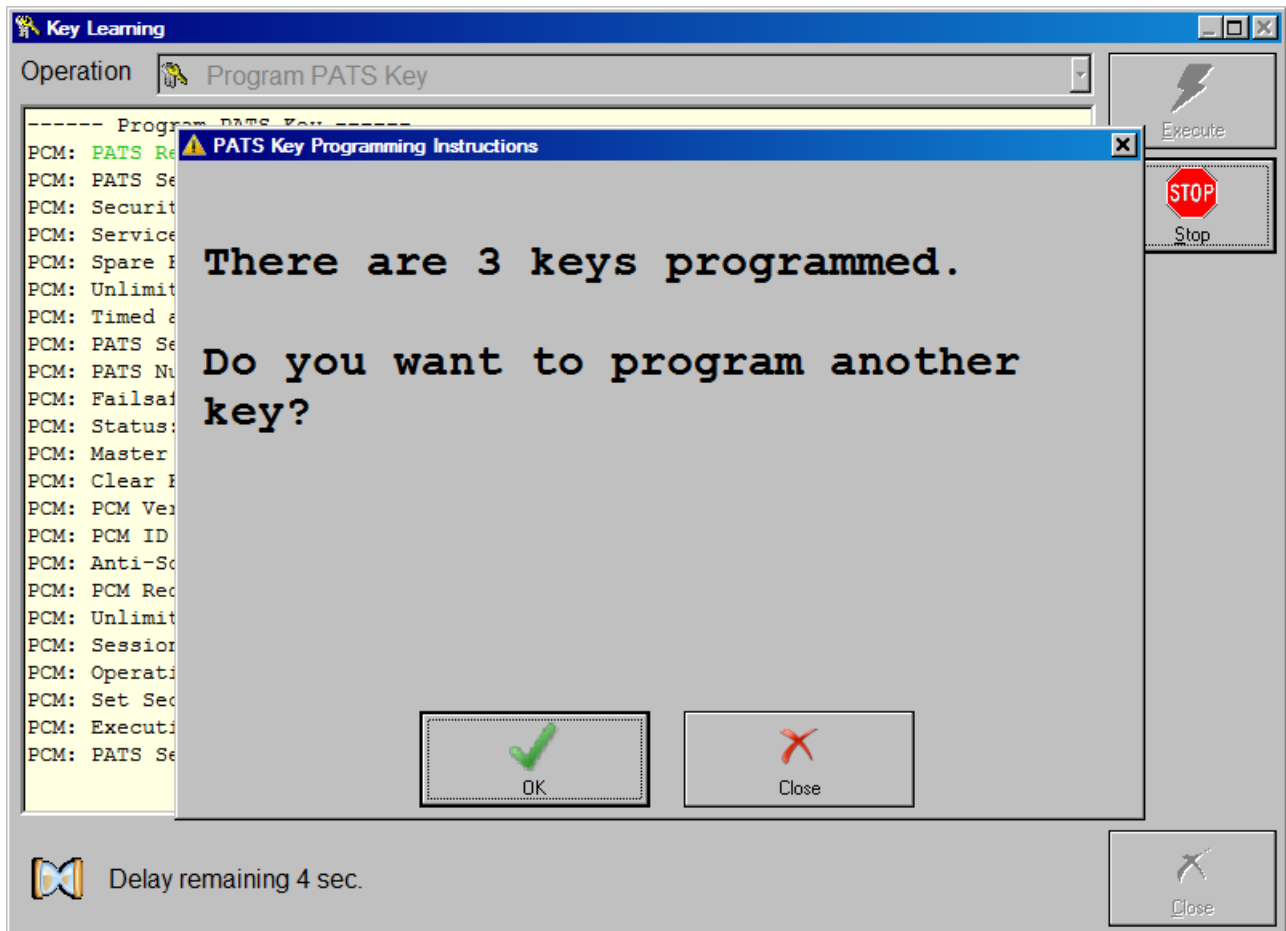


## 8.4 PATS Key Learning

This procedure will add keys to the PATS system memory.  
Keys already known to the PATS system will not be erased.

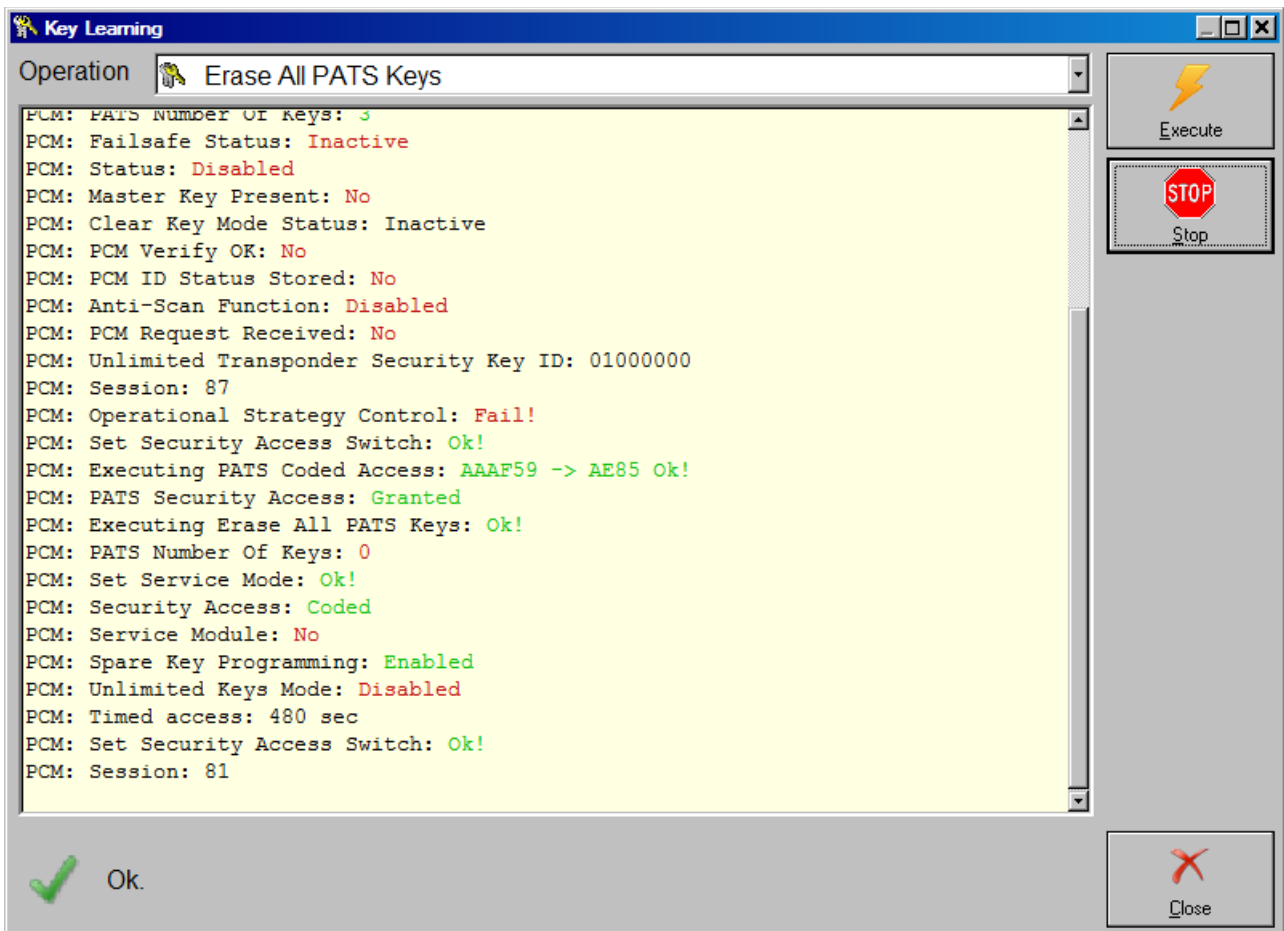






## 8.5 PATS Erase All Keys

This procedure will erase all stored keys from the PATS system memory. Once completed a minimum of 2 new keys must be programmed,



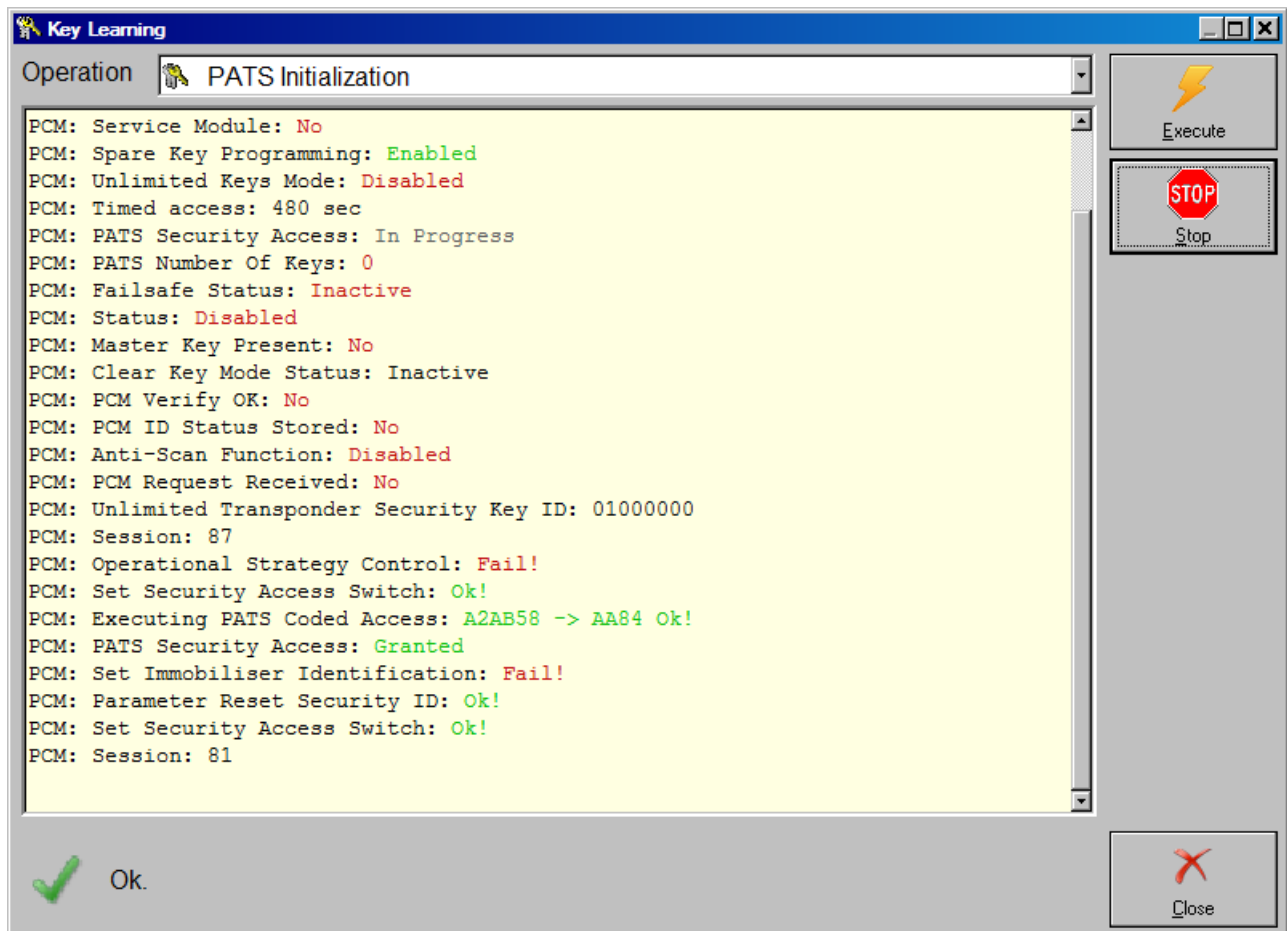
## 8.6 PATS Initialization

This procedure is used to match the PCM to IPC ( HEC ) and/or BCM or FIP as appropriate. It is important that the key in the ignition is programmed to the vehicle, otherwise module initialization is not possible.

PCM - Powertrain Control Module

HEC - Hybrid Electrical Cluster ( instrument cluster )

FIP - Fuel Injection Pump



## **8.7 Spare Key Programming Enable / Disable**

Enables or disables the spare key programming procedure as listed in the Owners manual.

## 8.8 Unlimited Key Mode Enable / Disable

Unlimited key mode is intended for use by those customers who need more than 8 keys for their vehicle.

The unlimited key mode is set up by creating a special, unique unlimited transponder security key code and programming this key code into all of the vehicle keys so they contain the same key code.

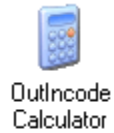
The customer must choose an 8-digit number (except for 00000000 or 00000001) to be programmed into all of their vehicles keys (or, to all of the keys they want programmed to one vehicle). All customer vehicles keys (or all keys for one vehicle) need to use the same number. Valid digits are 0-9 and the letters A-F.

If the PID UNL\_KEY\_ID is not available, unlimited key mode is turned on, and must be turned off before viewing the stored code. At this time, unlimited keys may be programmed to the vehicle. To view/change the stored code, follow the procedure for disabling the unlimited key mode below.

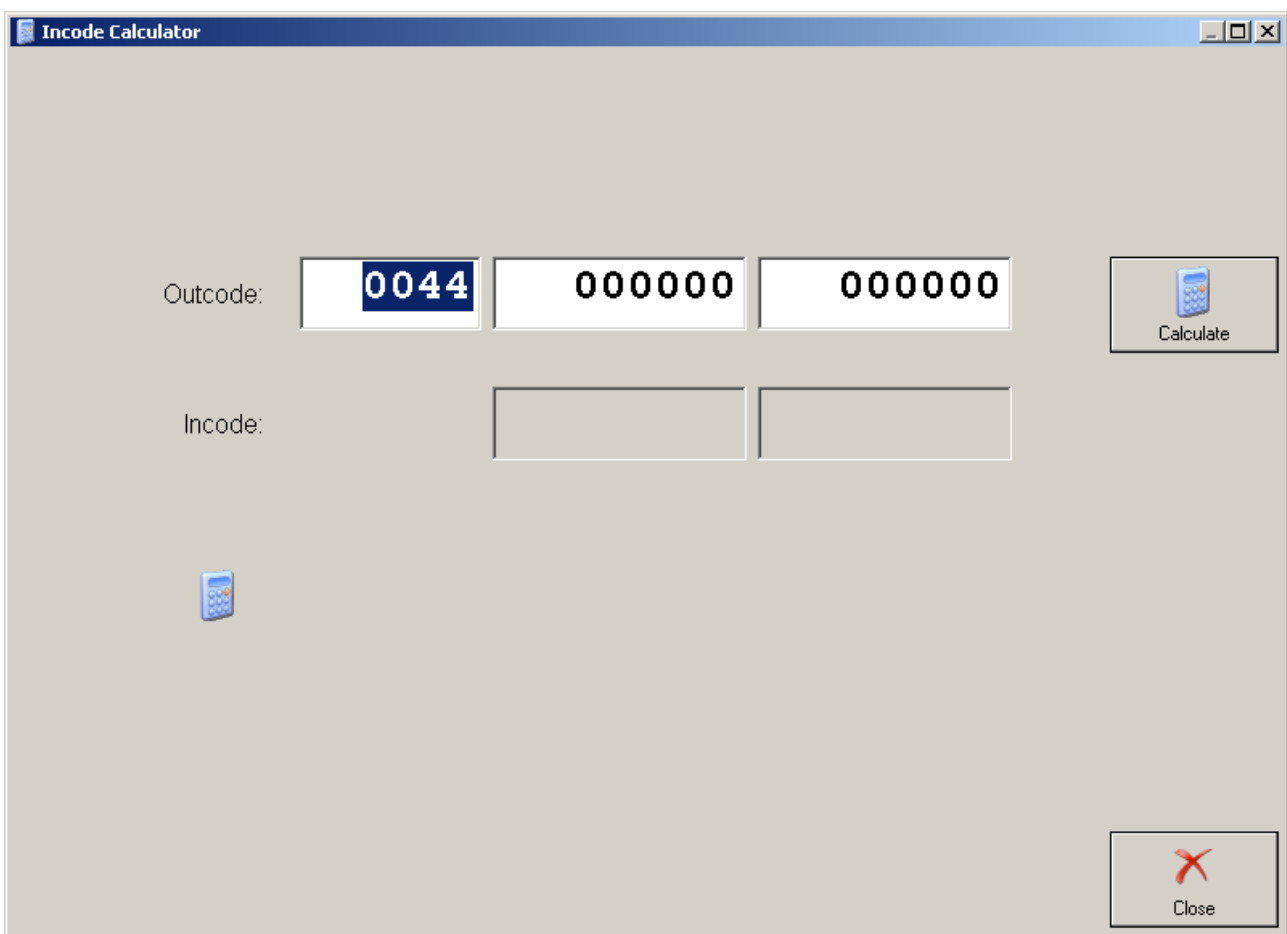
Monitor the PID UNL\_KEY\_ID and compare its value against the code chosen in Step 1. It should not be the same key code.

## 8.9 PATS OUT – IN code Calculator

The special function “PATS INcode Calculator” is commonly used together with Ford/Mazda IDS. Open Special Functions list control and select OutIncode Calculator icon.



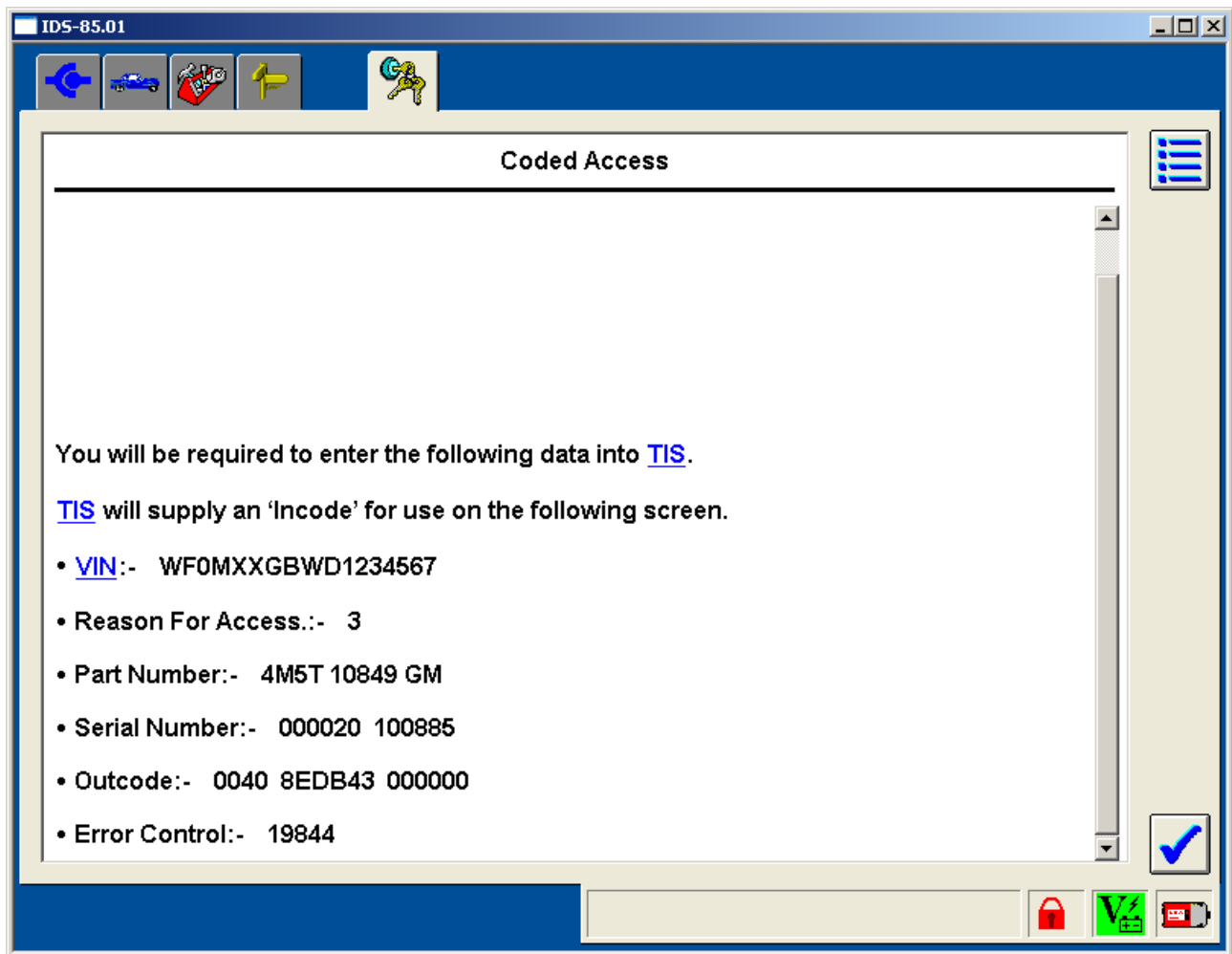
Following dialog appears on the display:



The screenshot shows a software window titled "Incode Calculator". It features two rows of input fields. The first row, labeled "Outcode:", contains three text boxes with the values "0044", "000000", and "000000". The second row, labeled "Incode:", contains two empty text boxes. To the right of the "Outcode:" fields is a button with a calculator icon and the text "Calculate". To the left of the "Incode:" fields is a small calculator icon. In the bottom right corner of the window is a button with a red "X" icon and the text "Close".



Start Ford IDS and connect to the car. Follow instructions and lets IDS read vehicle data. For example let you have this IDS screen.



The essential here is the line:

**Outcode:- 0040 8EDB43 000000**

This is "SINGLE" outcode.

It is used during key erasing or programming operation.

If ECU initialization is needed. IDS returns "DOUBLE" outcode:

**Outcode:- 0044 8EDB43 ABCDEF**

Note that “SINGLE” outcode has xx40 in the first digits group, and “DOUBLE” outcode has xx44. Be sure that you enter xx44 ( PATS Outcode Prefix ) as it is provided from IDS.

Enter digits from Outcode line in the three edit boxes and press button “Calculate”.

After a short time calculated INCode will appear in Incode edit box. Enter calculated value in IDS.

The screenshot shows a window titled "Incode Calculator". It contains two rows of input fields. The first row, labeled "Outcode:", has three text boxes containing "0040", "8EDB43", and "000000". The second row, labeled "Incode:", has two text boxes containing "D253" and "0000". To the right of the "Outcode" row is a button with a calculator icon and the text "Calculate". To the right of the "Incode" row is a button with a red "X" icon and the text "Close". A small calculator icon is also visible in the bottom left area of the window.

## **8.10 Vehicle Identification Data ( VID ) Block**

VID block is a array of 128 bytes present in PCM ( Powertrain Control Module ) in most of Ford/Mazda models.

VID consists of are many configurable vehicle parameters:

VIN

Tyre Size

Axle Ratio

Anti-Lock Brake System

Auxiliary Cabin Heaters

Cooling Pack

Air Conditioning

Transmission

Body Type

Driveline

Speed Control

Generator

Vehicle Speed Output

Vehicle Type

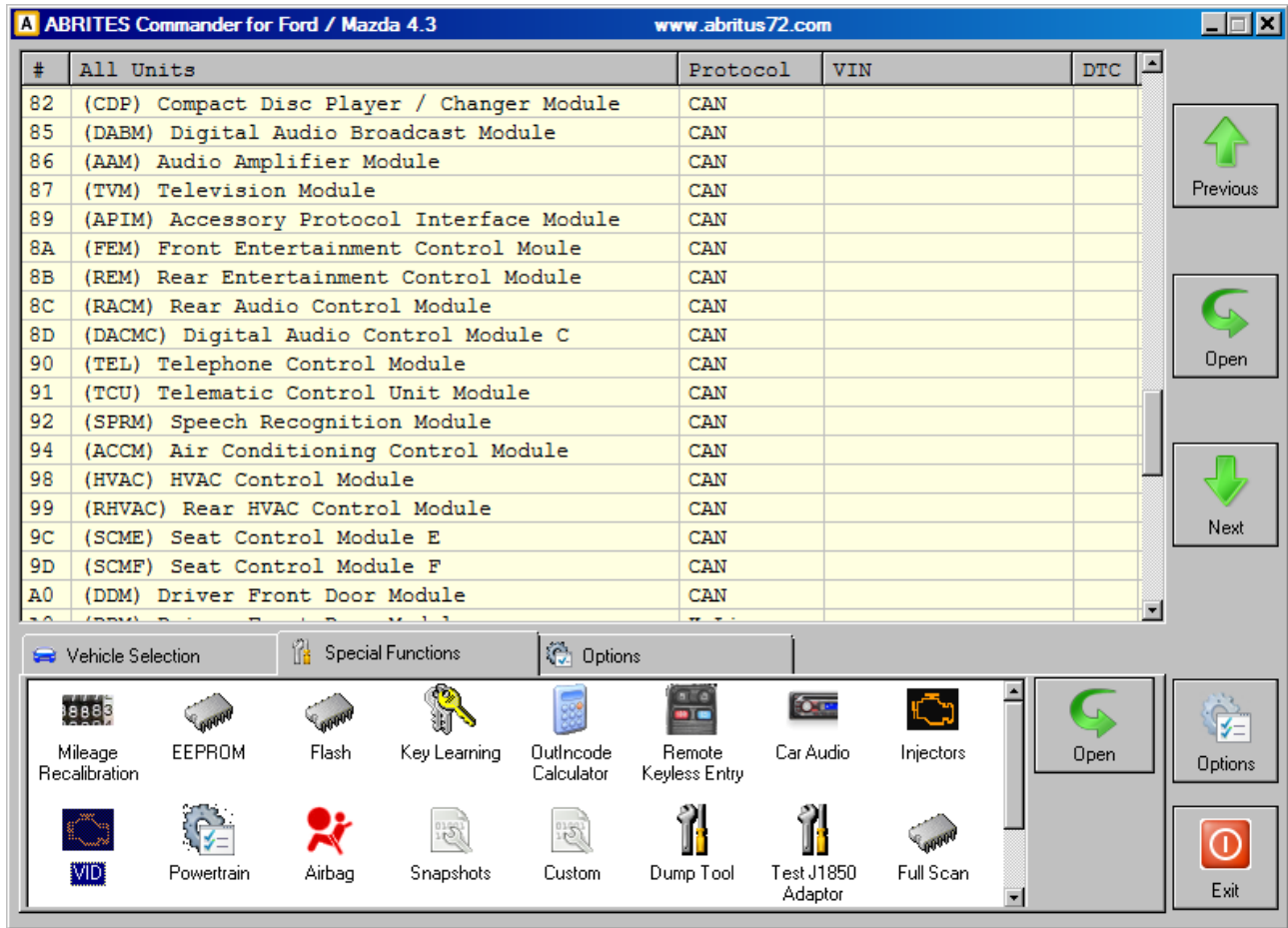
Fuel Type

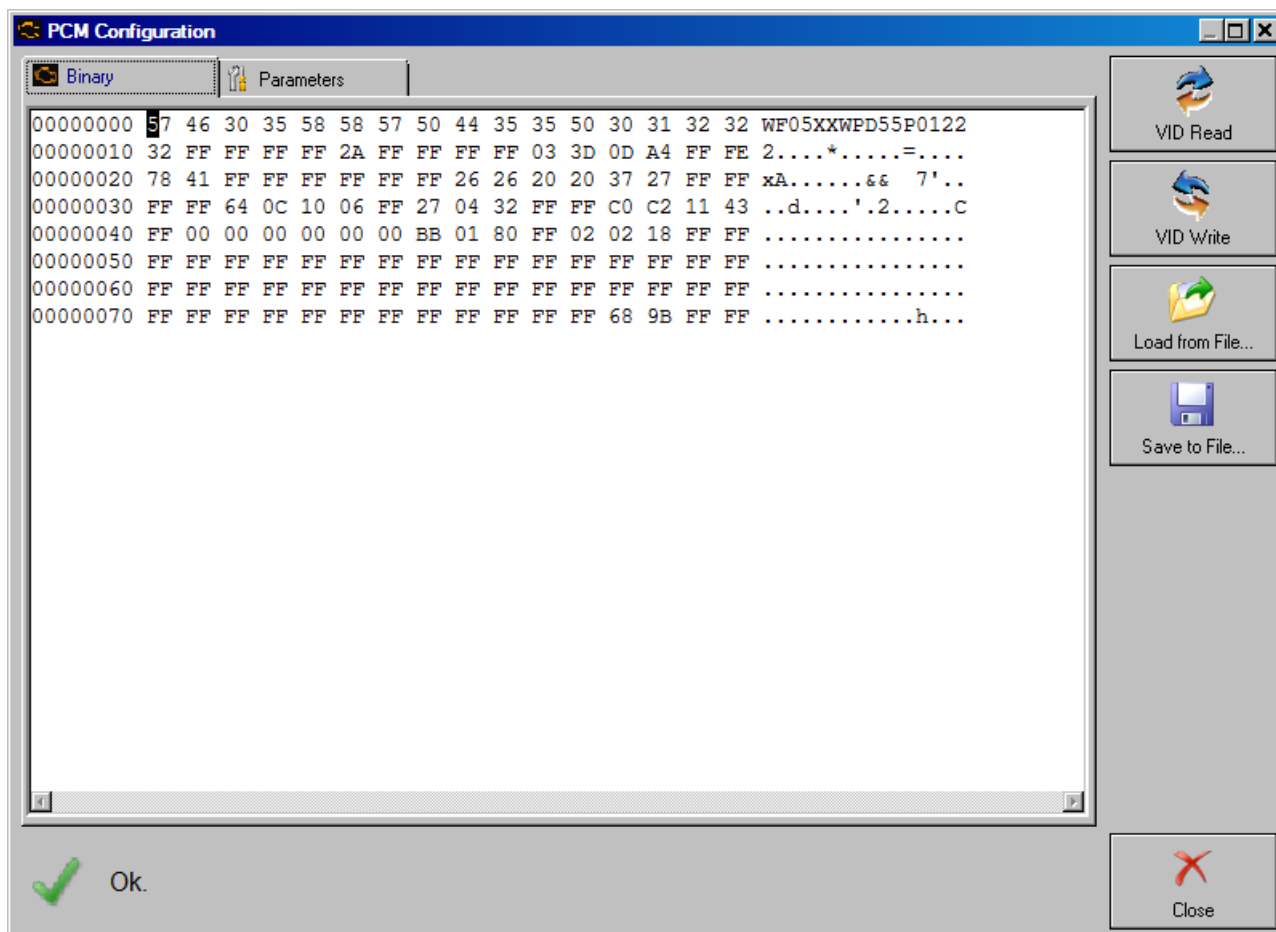
Octane Of Fuel

Octane Adjust / Spark Retard

Country

Go to the Special Functions screen. Select VID.











**PCM Configuration**

Binary Parameters

Parameter	Value
VIN	WF05XXWPD55P01222
Tyre Size	829
Axle Ratio	3.492
Anti-Lock Brake System	Equipped
Auxiliary Cabin Heaters	Equipped
Cooling Pack	North Africa / Gulf Coast Countries
Air Conditioning	Equipped
Transmission	Manual
Body Type	
Driveline	Front Wheel Drive
Speed Control	
Generator	120 Amp
Vehicle Speed Output	Message from ABS via CAN
Vehicle Type	Focus
Fuel Type	Gasohol
Octane Of Fuel	91 RON
Octane Adjust / Spark Retard	Normal
Country	European

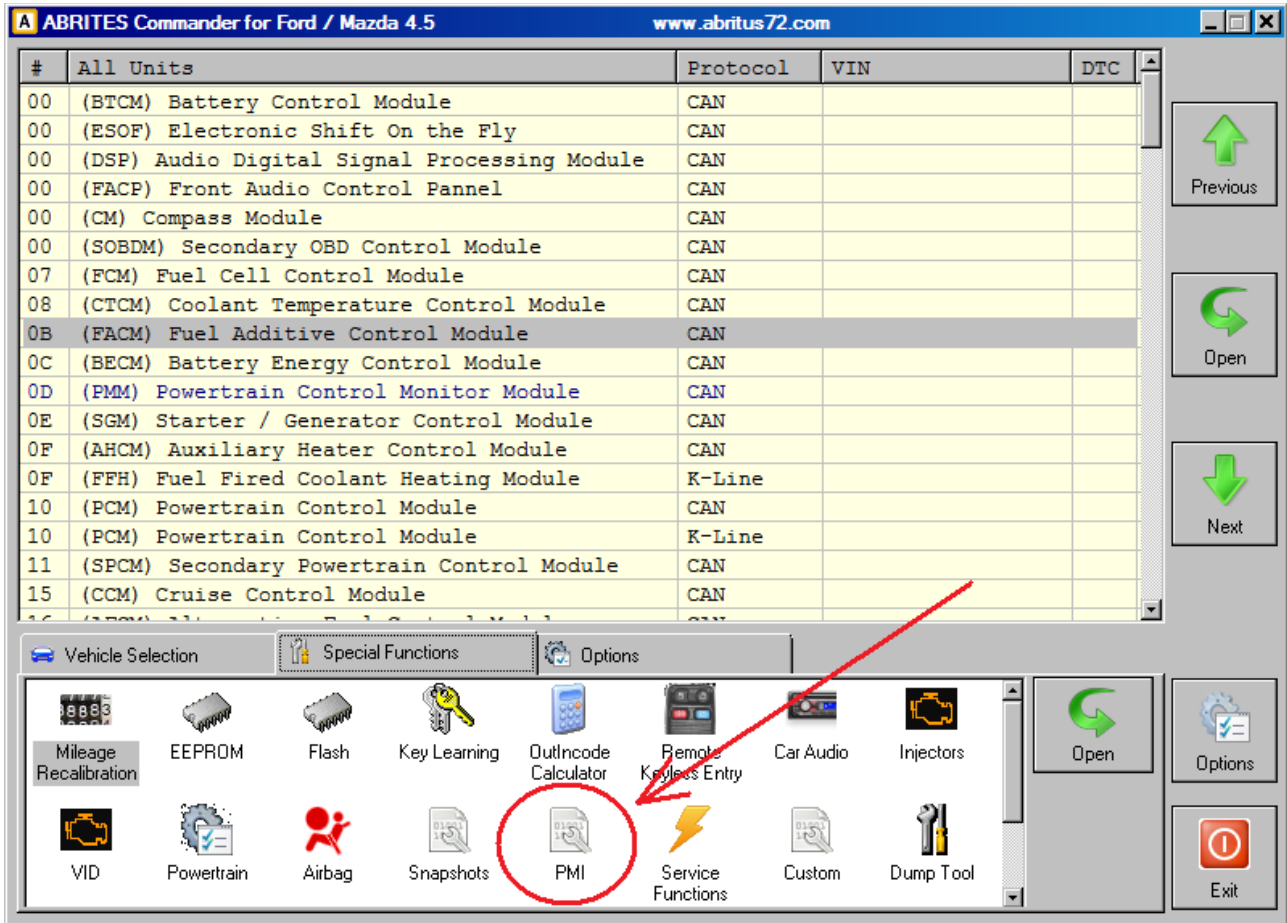
 VID Read  
 VID Write  
 Load from File...  
 Save to File...  
 Close

 Ok.

## 8.11 Programmable Module Installation ( PMI )

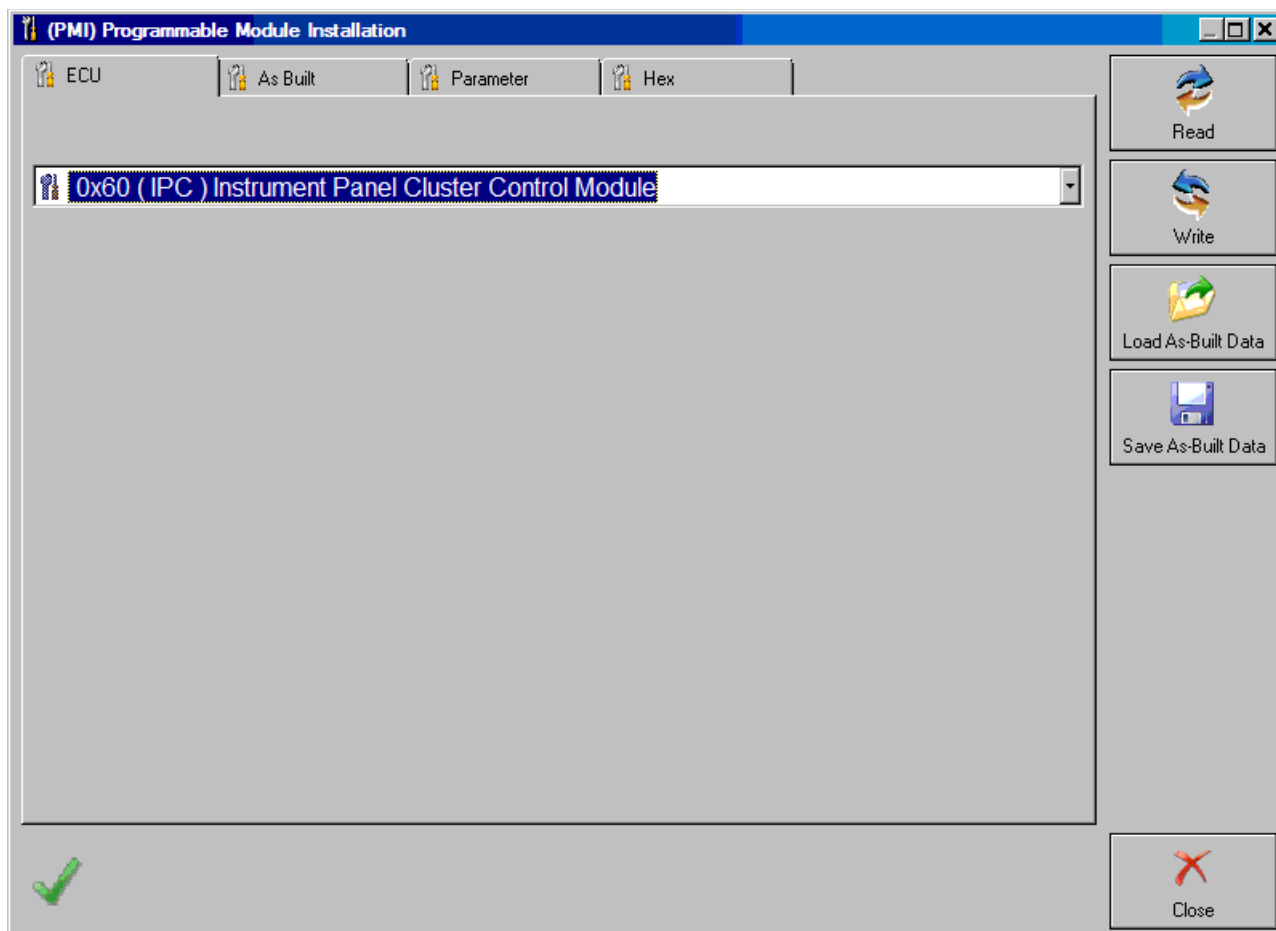
### Step 1

Go to the Special Functions screen. Select PMI.



## Step 2

Following Dialog Appears. Select ECU from combobox.





### Step 3

If the original ECU is available, you can read PMI data.

Use "Read" button.

### Step 4

If the original ECU is not available, you can obtain vehicle PMI data from Motorcraft website.

Connect to internet and open online form Motorcraft website.

Enter the VIN in the box and press "Submit" button at the bottom.

The screenshot shows a web browser window titled "As Built VIN Request - Windows Internet Explorer". The address bar shows the URL: [http://www.motorcraftservice.com/vdirs/SPubs/default.asp?pageid=spubs\\_as\\_call](http://www.motorcraftservice.com/vdirs/SPubs/default.asp?pageid=spubs_as_call). The page features the Ford logo and the text "Professional Technician Society". Below this, the form is titled "SYSTEM\_NAME" and "AS BUILT HOST COMMUNICATIONS". A blue box contains the instruction: "Please use OASIS to verify the VIN prior to requesting As Built data". The form is divided into two main sections: "Step 1. enter a VIN (Vehicle Identification Number)" and "Step 2. submit the As Built request". In Step 1, there is a "VIN" field with the value "WVF0WXXGCDW5B01234" and a "Previous VINs" field with a list of asterisks. A text box next to the "Previous VINs" field says: "Either enter a new VIN or select a previously requested VIN from the Previous VINs". In Step 2, there is a "Submit" button. A "Warning" box at the bottom states: "Warning: Inaccurate or no data will be displayed if an invalid VIN is entered (please verify VIN accuracy by running Oasis). Also, AS Built data only applies to some 1999 to current model year vehicles." The browser's status bar at the bottom shows "Done" and "Internet".

As Built VIN Request - Windows Internet Explorer

[http://www.motorcraftservice.com/vdirs/SPubs/default.asp?pageid=spubs\\_as\\_call](http://www.motorcraftservice.com/vdirs/SPubs/default.asp?pageid=spubs_as_call)

File Edit View Favorites Tools Help

As Built VIN Request

**Ford Professional Technician Society**

**SYSTEM\_NAME**

**AS BUILT HOST COMMUNICATIONS**

Please use OASIS to verify the VIN prior to requesting As Built data

**Step 1. enter a VIN (Vehicle Identification Number)**

**VIN**

WVF0WXXGCDW5B01234

**Previous VINs**

\*\*\*\*\*

Either enter a new VIN or select a previously requested VIN from the Previous VINs

**Step 2. submit the As Built request**

Your request will be submitted to As Built. During peak times, this operation could take up to 5 minutes. Do not press the submit button more than once. Doing so will only cancel the current request and issue another, which will start process over again.

**Submit**

**Warning:** Inaccurate or no data will be displayed if an invalid VIN is entered (please verify VIN accuracy by running Oasis). Also, AS Built data only applies to some 1999 to current model year vehicles.

Done Internet 100%

**Step 5**

The "Module Reprogramming" page will open with the "VIN" and "Vehicle Data" at the top.  
Below this are two columns, the one on the left is PCM data and the one on the right is BCE data.  
Only programmable modules available in that vehicle will be listed under BCE Modules.  
Some modules may have more than one line of data.  
If a module is not listed, then it is not a programmable module.

**Module Reprogramming**

**VIN:** WF0WXXGCDW5B01234  
**Vehicle Data:** 3735 FFFF FF69

[click here](#) if module data required is not available below.

PCM Module	BCE Modules	TSB	SSM	Instructions
<b>PCM 1</b> FFFF FFFF 0310	<b>720-01-01</b> C0C0 1152 0C			
<b>PCM 2</b> 410D A4FF FF02	<b>720-02-01</b> 5757 5757 57DD			
<b>PCM 3</b> 7841 FFFF FFC9	<b>720-03-01</b> 5746 3057 58A7			
<b>PCM 4</b> FFFF FF26 265D	<b>720-03-02</b> 5847 4344 57A9			
<b>PCM 5</b> 2020 3727 FFB2	<b>720-03-03</b> 3542 3031 3237			
<b>PCM 6</b> FFFF FFFF FF11	<b>720-03-04</b> 3334 95			
<b>PCM 7</b> FFFF FFFF FF12				
<b>PCM 8</b> FFFF FFFF FF13	<b>726-01-01</b> 640C 50FE ED			
<b>PCM 9</b> FFFF FFFF FF14	<b>726-02-01</b> 2704 308B			
	<b>727-01-01</b> 0203 083D			
	<b>730-01-01</b> 5746 3057 58B5			
	<b>736-01-01</b> 5746 3057 58BB			
	<b>741-01-01</b> 5746 3057 58C6			
	<b>760-01-01</b> 5746 3057 58E5			
	<b>760-01-02</b> 5847 4344 57E7			
	<b>760-01-03</b> 3542 3031 3275			
	<b>760-01-04</b> 3334 D3			
	<b>760-02-01</b> 006A			

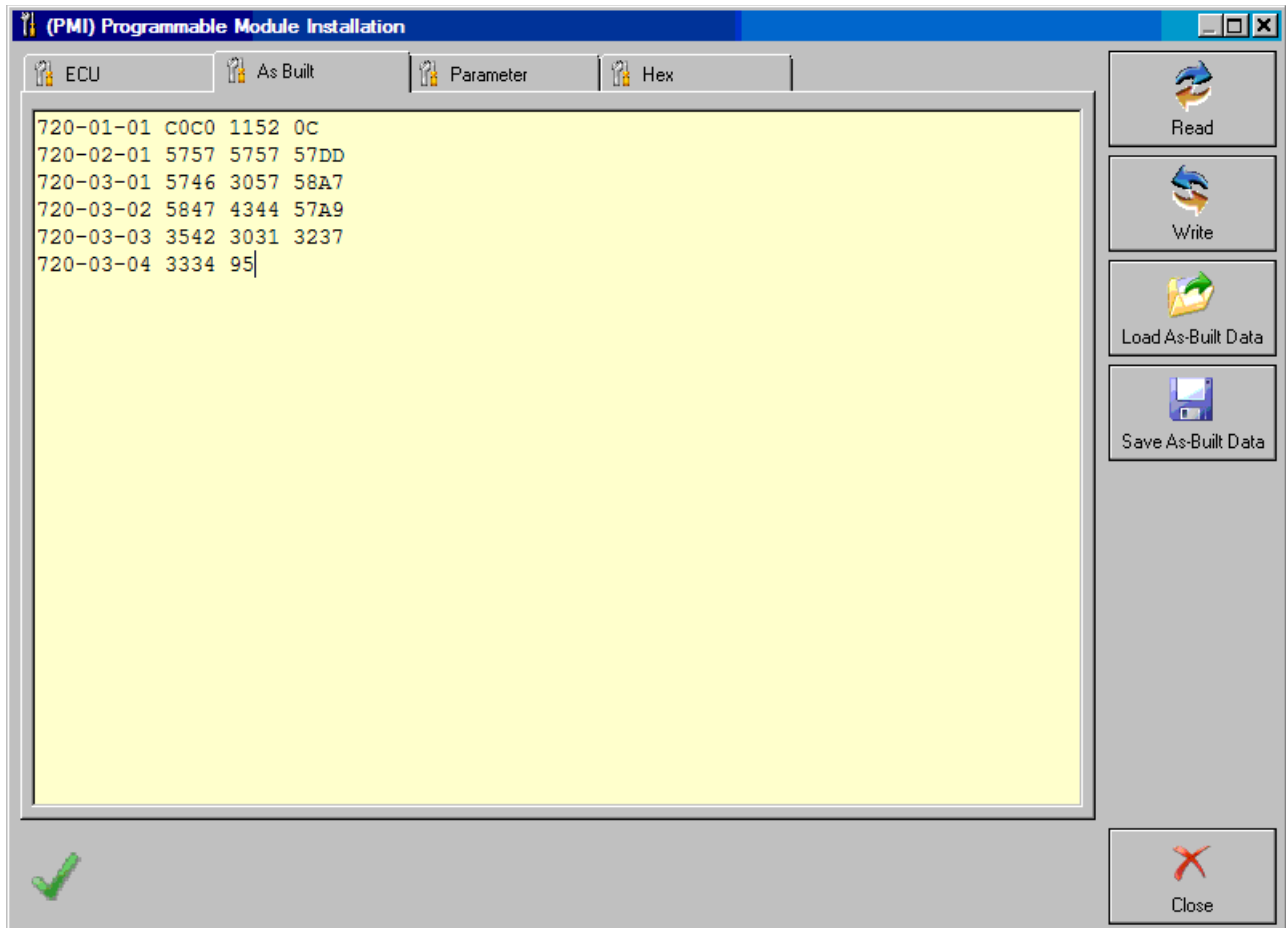
End of As Built information

## Step 6

Find data for desired ECU by ID.

Enter As-Built vehicle data in diagnostics.

Note that you must enter data without leading spaces, one entry per line.

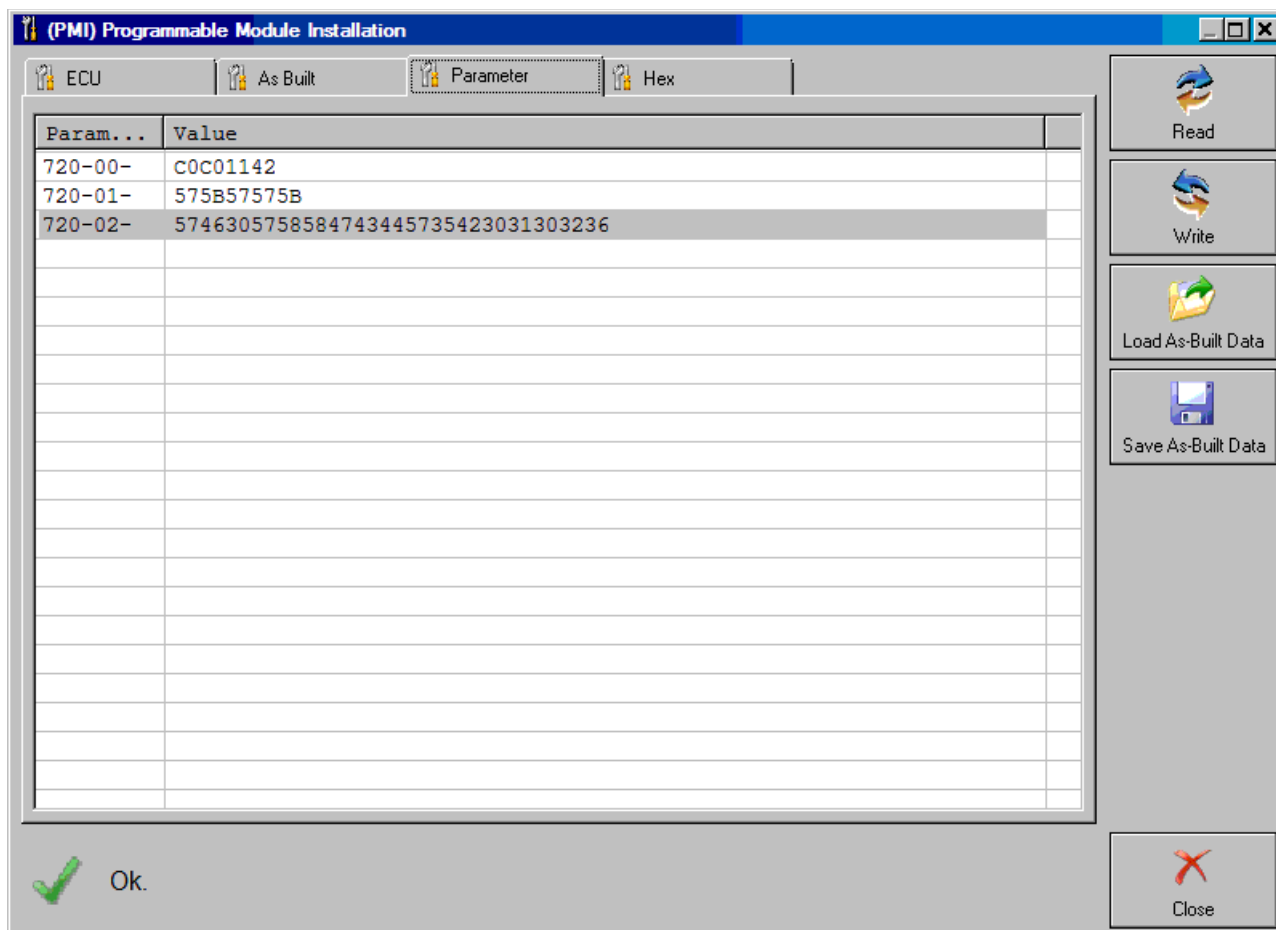


### Step 7

Another view format.

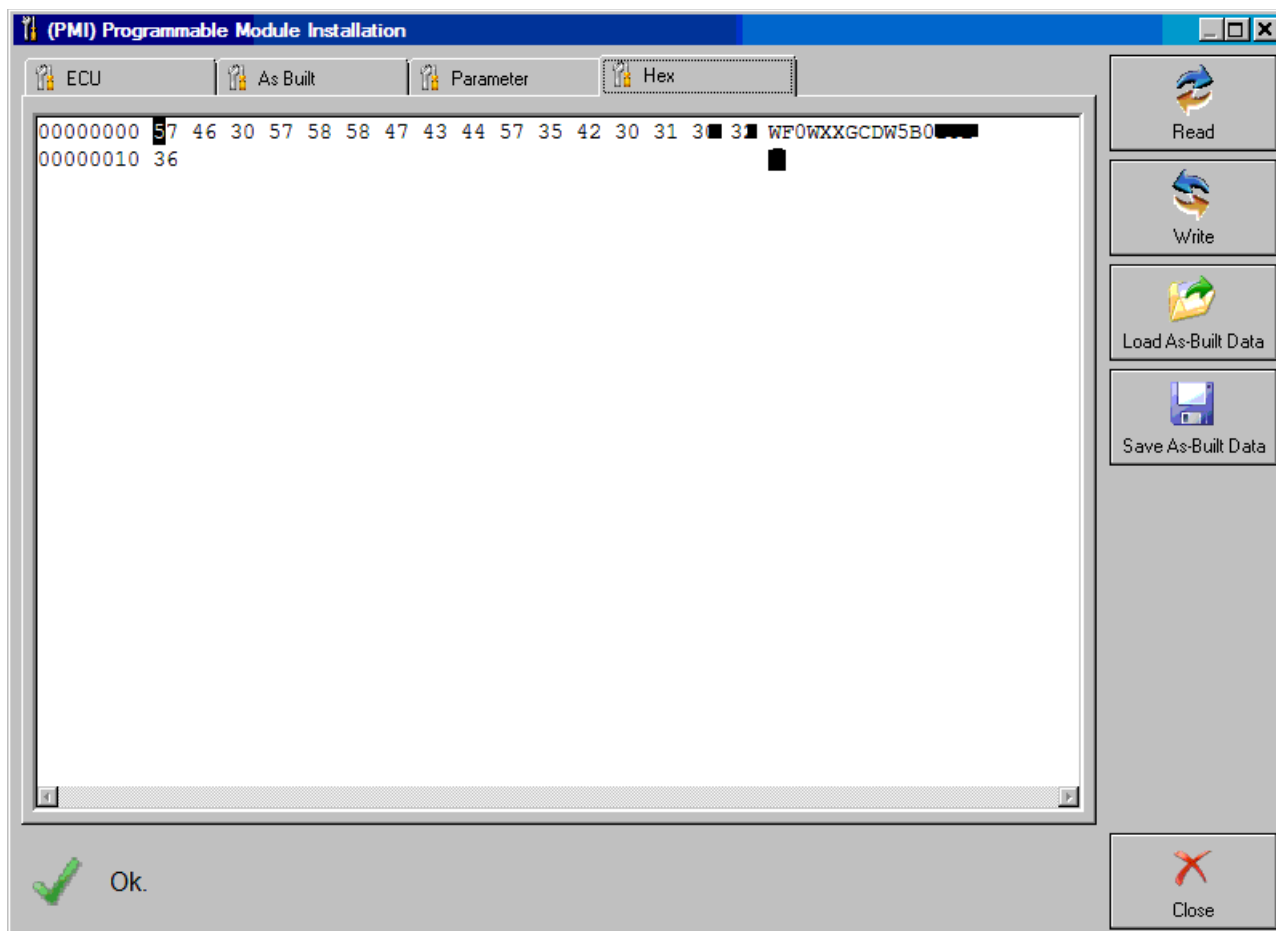
Here you can see whole PMI data block.

Double-click on data block to see and edit it in binary editor.



## Step 8

If needed edit As Built data before writing.



### Step 9

Turn Ignition OFF and properly connect new ECU.

Use "Write" button to enter data in newly installed ECU.

### Step 10

During the write process, automatic backup of PMI data is performed.

If something going wrong, you can find backup PMI file in AVDI log folder.

PMI backup files have format "Backup\_yyyymmdd\_hh.mm.ss.pmi".

Use "Load" and "Write" buttons to restore data.

## **8.12 Fuel Injector Programming (TDCi Engines)**

### **Fuel Injector Correction Factors**

There are 3 common situations that demand this function.

- After Injector replacement.
- Fuel Injection system calibration
- Drivability problems like Lack of power, Black smoke and the presence of DTC's P2336, P2337, P2338 can often be fixed by re-entering the existing 4 injector codes

Note:

- On earlier model years ( pre-2003 ) it is not possible to read the actual injector codes.
- It is important to check the codes carefully before entering them.
- After entering an injector code the fuel system will initially run without any pilot injector sequence. The car must be driven for a few kilometers.

### **Engine Type: Duratorq-Turbo Diesel Common Rail Injection**

#### **Capacity: 1.6L**

Implement this service function if a new fuel injector has been installed.

Each injector has an individual 9 digit code called an injector correction factor.

This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance.

Perform this procedure to enter the required injector correction factor.

The injector correction factor is located on the head of the injector.

The injector correction factor is 8 digits long.

Ignore the last digit of the 9 digit code printed on the fuel injector.

Enter the injector correction factors in cylinder order.

To update or enter a new code, select the required injector and enter the relevant 8 digit code.

Enter all of the required codes, then press the return key displayed on the screen.

### **Engine Type: Duratorq-Turbo Diesel Common Rail Injection**

**Capacity: 1.8L**

**Capacity: 2.0L**

The data required for each injector can be found on the injector body.

It consists of 16 characters - numbers and letters.

If you are certain that the original injectors are still fitted to the engine, you may find the data on a label on the engine.

### **Engine Type: Duratorq-Turbo Diesel Common Rail Injection**

**Capacity: 2.2L**

**Capacity: 2.4L**

**Capacity: 3.2L**

Carry out this procedure if the Fuel Injector has been replaced:

Each injector has an individual 16 digit code called an injector correction factor.

This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance.

Perform this procedure to enter the required injector correction factor.

The injector correction factor is located on the injector body.

To update or enter a new code, select the required injector and enter the relevant 16 digit code.

Enter all of the required codes, then press the return key displayed on the screen.

If a label listing the injector code is still present (on top of the engine), remove it.

Information on the label is no longer correct and could mislead other service technicians

The Pilot Correction Learn procedure must now be performed

### **Engine Type: Duratorq-Turbo Diesel Common Rail Injection**

**Capacity: 2.2L**

Perform this procedure if the following new component has been installed: Fuel Injector Each injector has an individual 6 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance.

Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. Enter the injector correction factors in cylinder order. To update or enter a new code, select the required injector and enter the relevant code. Enter all of the required codes, then press the return key displayed on the screen.

### **Engine Type: Duratorq-Turbo Diesel Common Rail Injection StgV**

**Capacity: 2.0L**

Perform this procedure if the following new component has been installed: Fuel Injector Each



injector has an individual 20 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance. Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. Enter the injector correction factors in cylinder order. To update or enter a new code, select the required injector and enter the relevant code. Enter all of the required codes, then press the return key displayed on the screen.

This function is required by service centres when an Injector needs to be replaced, or there is a driveability problem.

For 1.6 TDCi engines the each injector has an 8-digit calibration code stamped on the body.

For 1.8 , 2.0 , 2.2 and 2.4 TDCi engines the each injector has a 16-digit calibration code stamped on the body.

These codes relate to the electrical and structural characteristics of each injector, which are defined during production. The PCM must know the calibration codes for each injector in order to treat and operate the injectors in the correct manner. This helps to reduce emissions and improve performance. The code must be programmed in by communicating and downloading the code into the PCMs memory.

There are three common situations which demand this function.

1. After Injector replacement.
2. Fuel injection system 'calibration'.
3. To cure drivability problems. Lack of power, black smoke and the presence of DTC's:

**P2336** - Cylinder 1 Above Knock Threshold

**P2337** - Cylinder 2 Above Knock Threshold

**P2338** - Cylinder 3 Above Knock Threshold

**P2339** - Cylinder 4 Above Knock Threshold

can often be fixed by re-entering the existing 4 injector codes.

Fuel Injectors Programming is used on the following vehicles:

Model	Engine	MY	.
Fiesta	1.6 TDCi	2004 -	
Focus	1.8 TDCi	2001 - 2005	FFDA/F9DA/F9DB
Focus	2.0 TDCi	2001 - 2005	FIFA
Focus (new shape)	1.6 TDCi	2005 -	
Focus C-Max	1.6 TDCi	2005 -	
Mondeo	2.0 TDCi	2000 - 2006	HJBA/HJBB/HJBC/FMBA/N7BA
Mondeo	2.2 TDCi	2005 - 2006	
Transit	2.0 TDCi	2000 - 2005	
Transit	2.4 TDCi	2000 - 2005	H9FA

Transit Connect	1.8 TDCi	2002 - 2006	
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**NOTE:**

- On earlier model years (approx pre-2003) it is not possible to read the actual injector codes. On these vehicles you will see '00 00 00 00 00 00 00 00' or 'FF FF FF FF FF FF FF FF' or a mixture.
- After entering an injector code the fuel system will initially run without any pilot injection sequence. The car must be driven for a few miles to correct this. The codes of the ORIGINAL injectors fitted to vehicle can be found on a label, which is fitted to the side of the engine or on the engine rocker top (if it has not yet been removed).

The codes of the ORIGINAL injectors fitted to vehicle can be found on a label, which is fitted to the side of the engine or on the engine rocker top (if it has not yet been removed).

The codes on the label are in the following format:

(1&2)	X111111122222222X
(3&4)	X3333333344444444X

Where:

11111111 is the code for injector 1,  
22222222 is the code for injector 2,  
33333333 is the code for injector 3,  
44444444 is the code for injector 4.

**NOTE:**

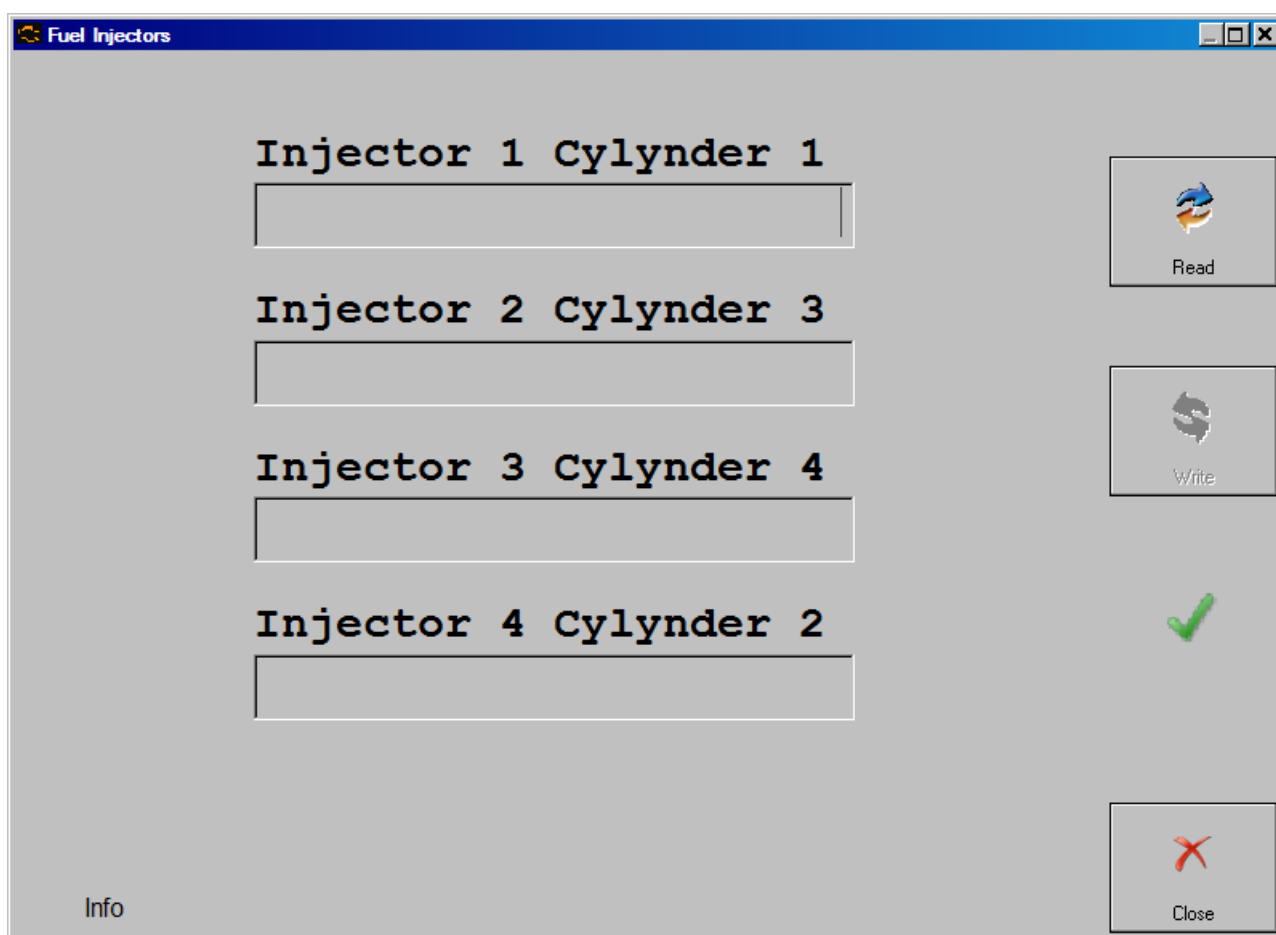
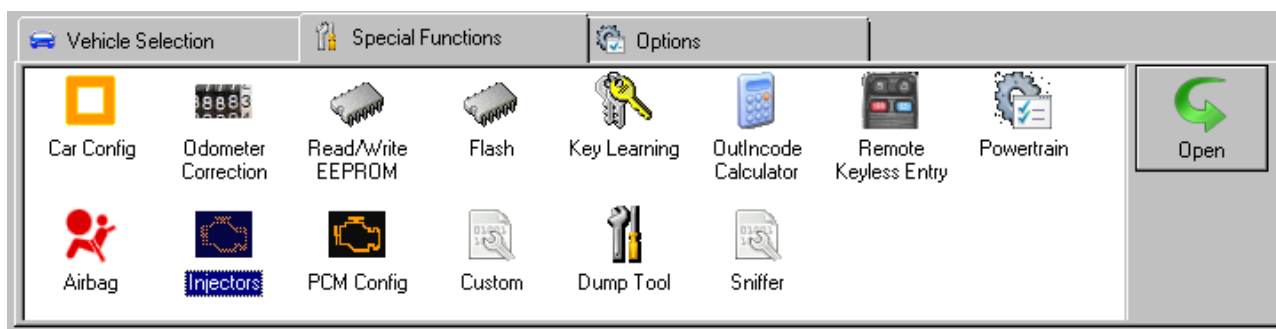
The injectors are in the physical order, NOT firing order.

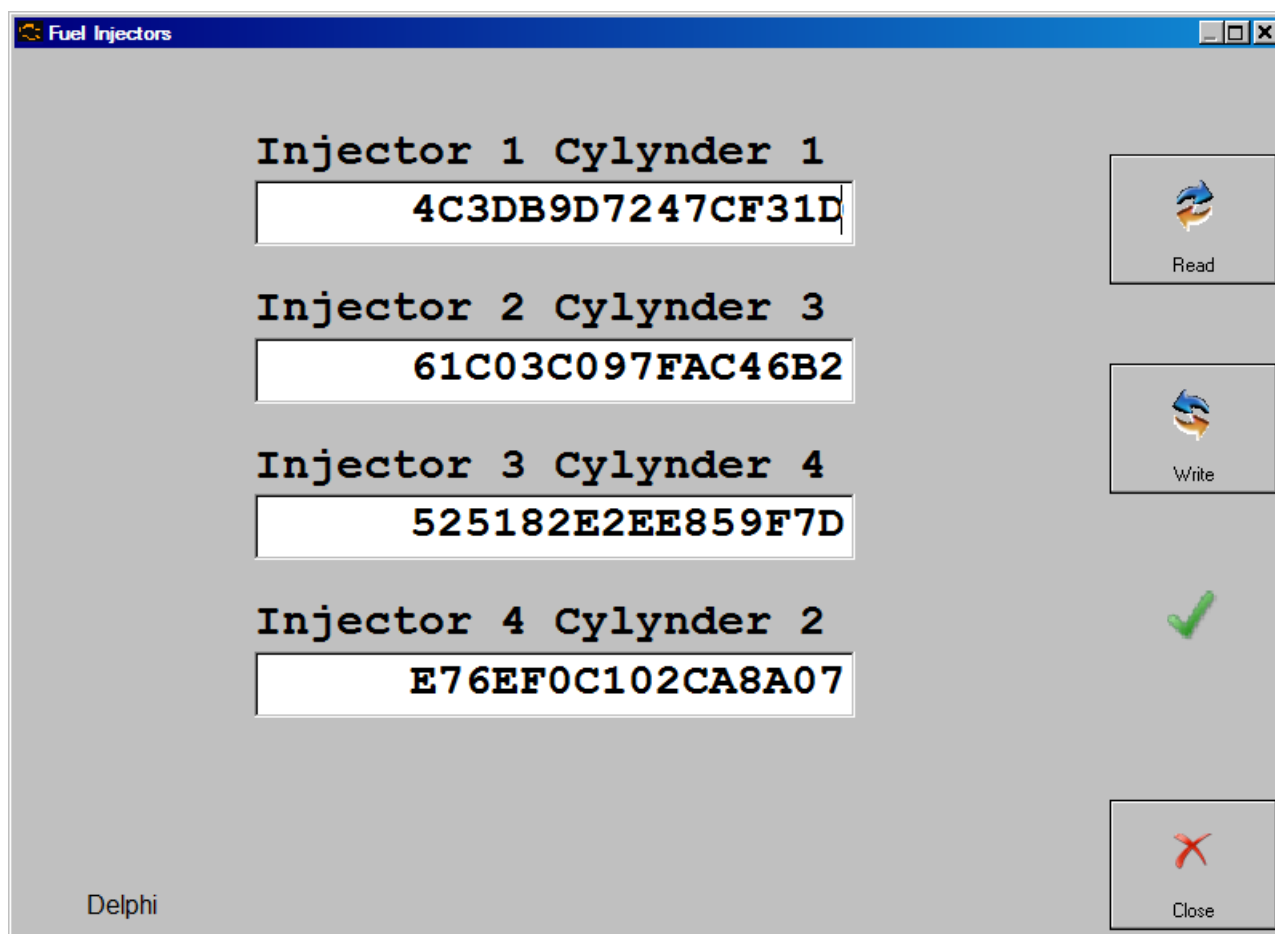
When replacing an Injector the code stamped on the body of the new Injector must be programmed into the PCM, NOT the code on the label.

**Duratorq-Turbo Diesel Common Rail Injection 2.4L** Carry out this procedure if the following component has been replaced: **Fuel Injector** Each injector has an individual 16 digit code called an injector correction factor. This code applies individual compensation for each injector as a means of reducing the fuel delivery tolerance. Perform this procedure to enter the required injector correction factor. The injector correction factor is located on the injector body. To update or enter a new code, select the required injector and enter the relevant 16 digit code. Enter all of the required codes, then press the return key displayed on the screen.





**WARNING:**

**Before attempting Injector Programming it is necessary for the vehicle to be left stationary with the Engine off for at least 8 hours. This is to ensure that the engine is stone cold before Injector Programming is performed. Failure to follow these instructions may result in failure of the Injector Programming function and/or drivability problems.**





**Fuel Injectors**

Injector 1 Cylynder 1	<input type="text" value="9CC452AA"/>	 Read
Injector 2 Cylynder 3	<input type="text" value="6F8656AD"/>	 Write
Injector 3 Cylynder 4	<input type="text" value="0C7DF21B"/>	
Injector 4 Cylynder 2	<input type="text" value="02E48BB5"/>	
Bosch		 Close

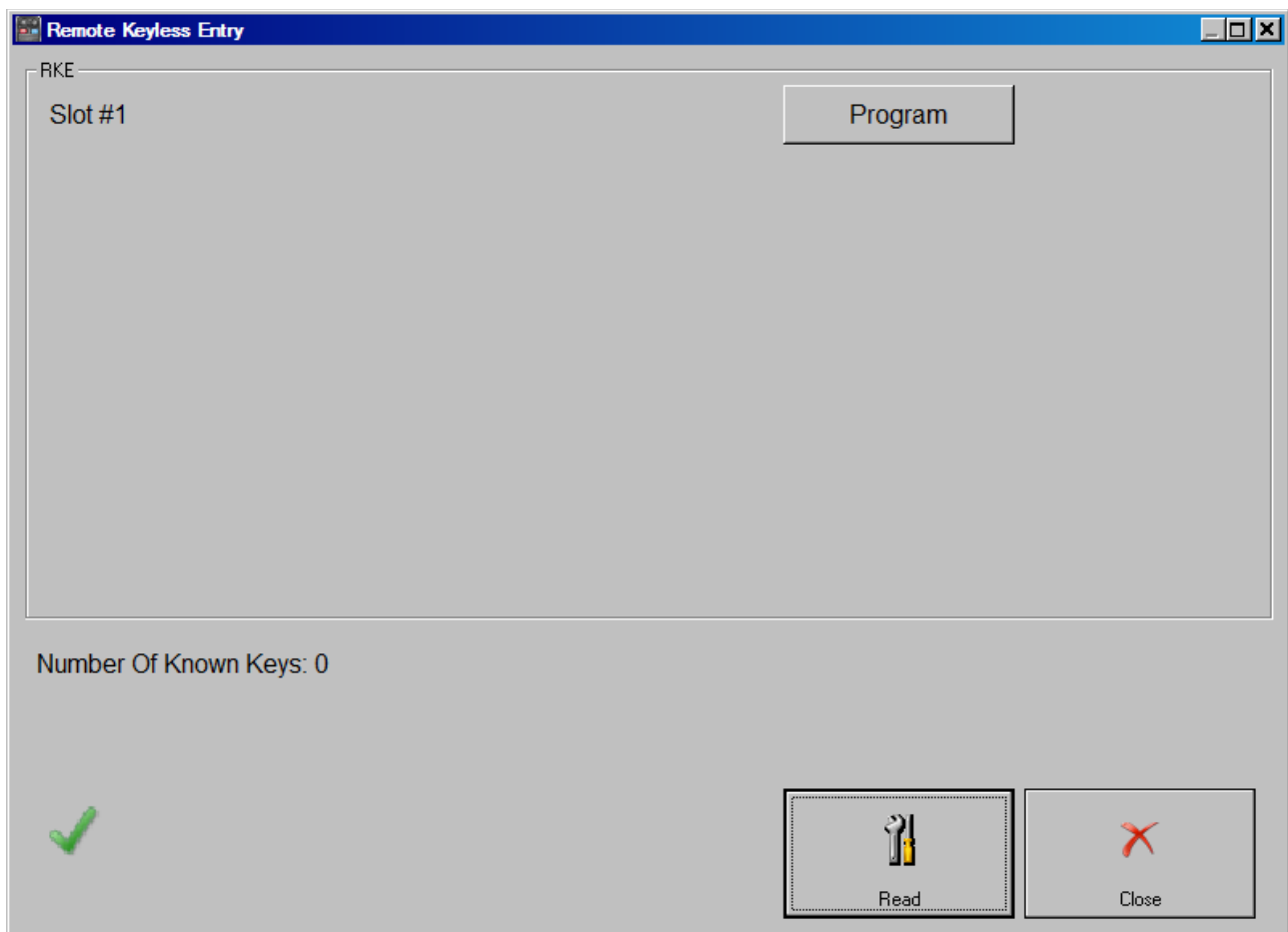
## Remote Keyless Entry

Go to the Special Functions screen.

Select Remote Keyless Entry.



Following Dialog Appears



Turn ignition OFF and press button “Read” to get number of programmed smart keys.  
Press button “Erase” to erase all of programmed smart keys.  
Press button “Program” to program 1 smart key. You will be prompted to remove Key

Cover and to place the key in emergency slot in the steering column shroud  
All of smart key operations must be performed while ignition is OFF.

#### Manual reprogram a remote transmitter.

The following procedure has to be used to program the remote control key.

1. Turn ignition from OFF to RUN 4 times within 6 seconds with the 4-th time ending in OFF.
2. The system will chime to confirm programming mode entry.
3. Press any button on the first remote transmitter.
4. System will chime to confirm programming.
5. Repeat steps 2 and 4 for all subsequent remote transmitters.
6. Turn ignition to the RUN position to exit the programming mode.

#### Note:

- All keyfobs for the vehicle must be programmed at the same time. Any of the keyfobs which are not programmed during this procedure will no longer function.
- Up to 4 transmitters can be programmed.

### **8.13 Dump Tool**

Dump Tool is an instrument for editing the content of the EEPROM files of specific electronic control units. You have to select a unit and load a dump file. Then when you click on the "Parameters..." button you will see a pop-up window with all available parameters related to the chosen unit. Typical parameters are odometer, security code and VIN. For the airbag units the option clear crash data is available. You can modify them by clicking on the parameter value. When complete with modifications click on the OK button. The dump data will be updated accordingly. All necessary check sums will be regenerated.



## 9. Service Functions

- **Powertrain Control Module (PCM)**

- **Reset Keep Alive Memory ( KAM )**

This procedure will reset the Learned Values stored in the Powertrain Control Module ( PCM ) such as idle and fuel.

- **Reset the Diesel Particulate Filter (DPF) Learned Values**

This procedure must be carried out if a new diesel particulate filter is installed

The powertrain control module will continually learn the characteristics of certain components over time. There may be differences in the characteristics from the old and new components which will result in differences in the learned values. If a new component is installed the difference in learned values may result in poor driveability or set a diagnostic trouble code. This service function will reset the learned values of the old component. The learning process of the new component may occur immediately or over a number of drive cycles.

- **Reset the Water in Fuel ( WIF ) Warning Indicator**

Execute this procedure only if water is detected in the fuel. After performing this procedure the WIF warning indicator is extinguished.

- **Reset the Knock Sensor Learned Values**

Execute this procedure only if a full set of replacement injectors has been fitted.

The engine must not be running.

- **Reset the Fuel Metering Valve Learned Values**

Execute this procedure if High Pressure Fuel Pump has been renewed.

The engine must not be running.

- **Reset the Intake Air Throttle Valve Learned Values**

Execute this procedure if Intake Air Throttle Valve has been installed.

- **Reset the Exhaust Gas Recirculation ( EGR ) Valve Learned Values**

Execute this service function if a new exhaust gas recirculation valve has been Installed.

- **Reset the Differential Pressure Sensor Learned Values**

This procedure will return the learned values back to the nominal settings.

- **Reset the High Pressure Fuel System Learned Values**

This service function must be performed if any new components associated with the high pressure fuel pressure system have been installed.

The powertrain control module will continually learn the characteristics of certain components over time. There may be differences in the characteristics from the old and new components which will result in differences in the learned values. If a new component is installed the difference in learned values may result in poor driveability or set a diagnostic trouble code. This service function will reset the learned values of the old component. The learning process of the new component may occur immediately or over a number of drive cycles.

- **Fuel Injector Correction Factors**

Execute this procedure if a Fuel Injector has been replaced.

- **Relearn Vehicle Data**

Execute this procedure to force a previously configured PCM to relearn new configuration data from BCM.

- **Reset the Mass Air Flow ( MAF ) Sensor Learned Values**

Execute this service function if a new mass air flow sensor has been installed.

- **Reset the Fuel Pressure Relief Valve Open Count Learned Value**

This procedure clears the counters that store the total number of times the fuel rail pressure relief valve has opened.

- **Reset the Fuel Pressure Relief Valve Open Duration Learned Value**

This procedure clears the counters that store the total time the fuel rail pressure relief valve has opened.

- **Speed Limiter**

This procedure sets maximum vehicle speed.

- **Transmission Control Module ( TCM )**

- **Body Control Module ( BCM )**

- **Set Vehicle Power Mode**

This application enables the setting of the vehicle power mode.

- **Restraints Control Module ( RCM )**

- **Clear Restraint Control Module (RCM) Crash Data Memory**

This routine will clear the crash data memory in the Restraints Control Module.

- **Restraints Control Module (RCM) Module Central Car Configuration (CCC) Update**

Carry out this procedure if RCM module has been replaced

- **Passenger Air Bag Deactivation (PAD) Switch Activation**

The following procedure will activate/deactivate the passenger air bag switch.

## 10. Ford OBD-II diagnostic interface pinout and wiring

16 pin J1962 OBD-2 car proprietary connector at the Ford car.



Diagnostic interface for all model Ford vehicles.

Pin	Signal	Description
1		
2	J1850 PWM Bus+	
3	LS CAN High	Low speed (125Kb) CAN bus or UBP.
4	CGND	Chassis ground
5	SGND	Signal ground
6	HS CAN High	High speed (500 Kb) CAN bus.
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
8		
9		
10	J1850 PWM Bus-	
11	LS CAN Low	Low speed (125Kb) CAN bus.
12		
13	FEPS	Flash EEPROM Program Signal. +18V
14	HS CAN Low	High speed (500 Kb) CAN bus.
15		
16	+12V	Battery power

### Interfaces used:

1996 - 2004 : ISO 9141

1996 - 2007 : UBP

1996 - 2001 : J1850-PWM only

2002 - 2006 : J1850-PWM or CAN

after 2006 : CAN

## 11. Troubleshooting

Below you can find a list of typical problems and how to solve them:

### **Problem:**

When starting the “ABRITES diagnostics for Ford/Mazda” a message box with the text “Connection Error: Interface not connected!” appear:

### **Solution:**

- Be sure that the USB interface drivers are installed properly. You can look at the device manager, the USB interface should appear as “USB Serial Port (COMxx)” where “xx” is the number of the port.
- Try to reconnect the USB connector of the interface
- Try to reconnect the OBD2 connector of the interface
- Be sure that the interface is connected with the car properly

## 12. Abbreviations

<b>CAN</b>	Controller Area Network
<b>DTC</b>	Diagnostic Trouble Code
<b>ECM</b>	Engine Control Module
<b>ECU</b>	Electronic Control Unit
<b>IPC</b>	Instrument Panel Cluster
<b>TCM</b>	Transmission Control Module
<b>SLM</b>	Shift Lever Module
<b>TPMS</b>	Tire Pressure Monitoring System
<b>ACC</b>	Adaptive Cruise Control
<b>TC</b>	Traction Control
<b>ESP</b>	Electronic Stability Program
<b>EPS</b>	Electro Power Steering
<b>EHPS</b>	Electro Hydraulic Power Steering
<b>SAS</b>	Steering Angle Sensor
<b>SADS</b>	Semi Active Damping System
<b>CIM</b>	Column Integrated Module
<b>BCM</b>	Body Control Module
<b>PATS</b>	Passive Anti Theft System.
<b>DLC</b>	Data Link Connector
<b>PCM</b>	Powertrain Control Module
<b>KOEO</b>	Key ON Engine OFF Test
<b>KOER</b>	Key ON Engine Running Test
<b>RKE</b>	Remote Keyless Entry



## 13. Contact Information

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